

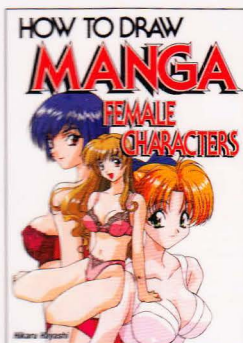
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Putting Things
in Perspective

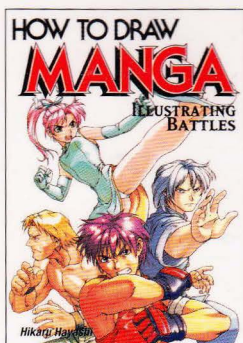


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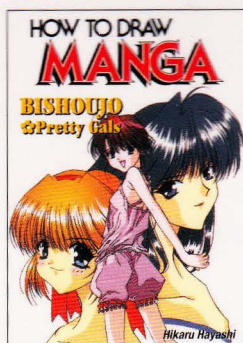
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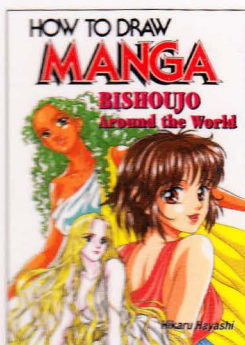
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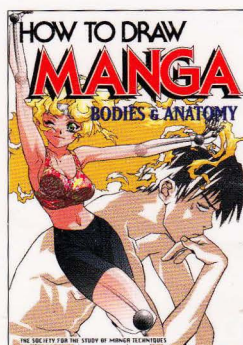
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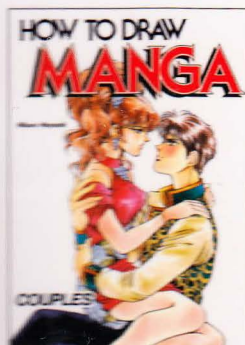
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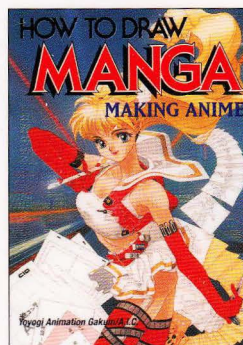
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HOW TO DRAW **MANGA**

Putting Things in Perspective
Backgrounds/Crowds

HOW TO DRAW MANGA:
Putting Things in Perspective
by K's Art

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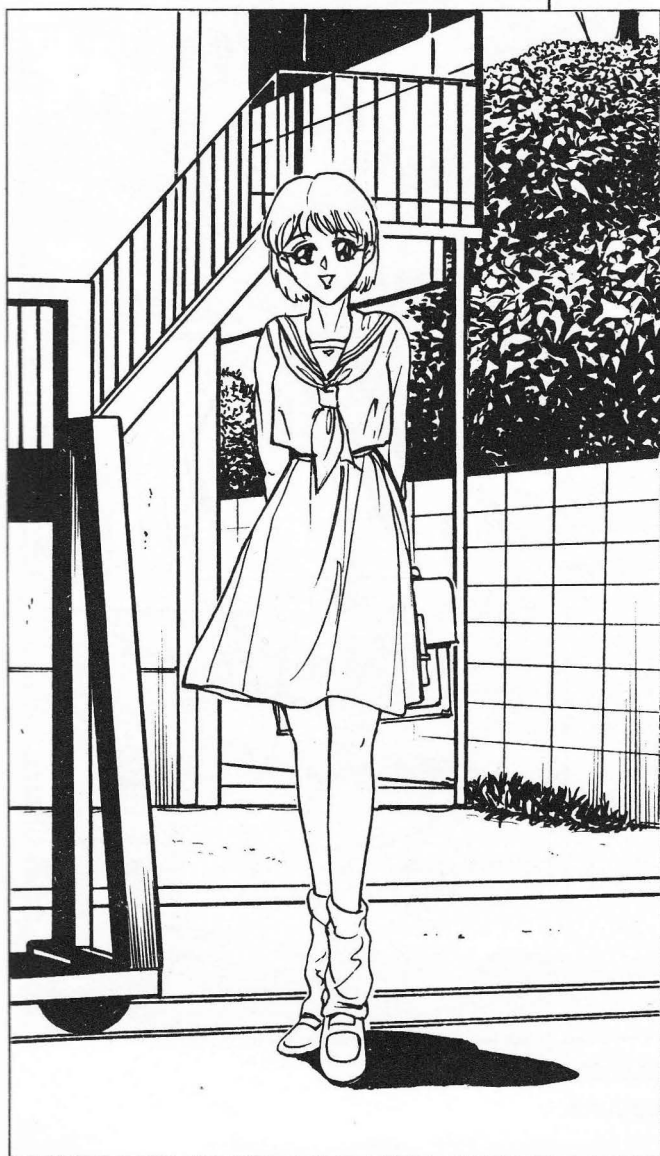
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Backgrounds indicate where characters are. They are drawn to illustrate places and situations.



A cut with the background included

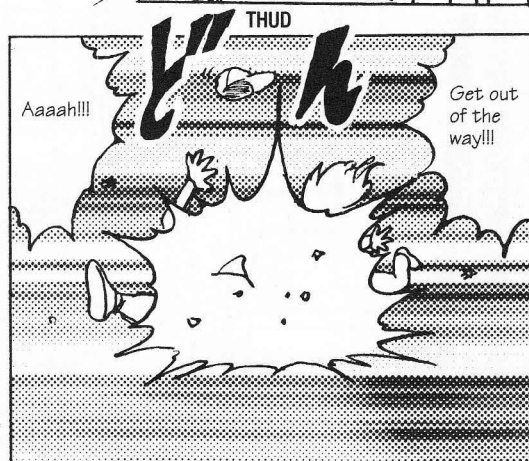
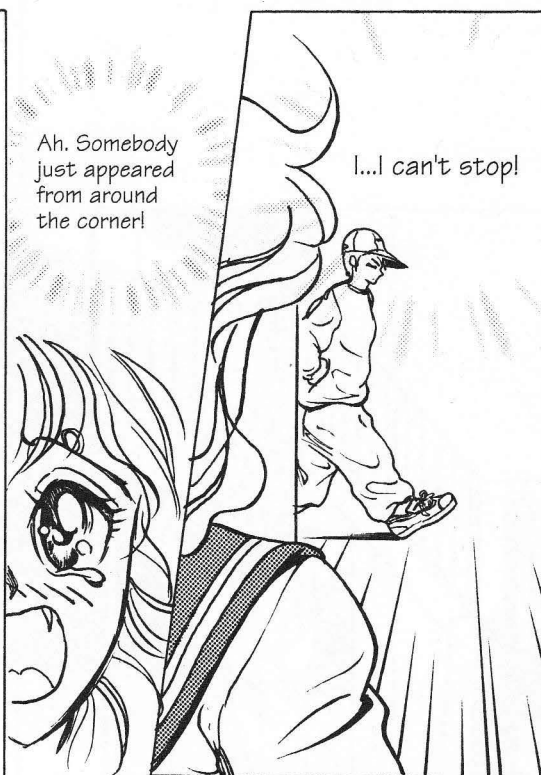


A cut with only the character

What backgrounds provide

- Give depth to a picture and create spatial expansion.
- Allow expression of the time of day and season.
- Bring out the characteristics and moods of characters.
- Convey a clear image without use of words.

• Example without background



In this scene, a girl in a hurry collides with someone at a corner. The scene is much easier to grasp with the background.

• Example with background



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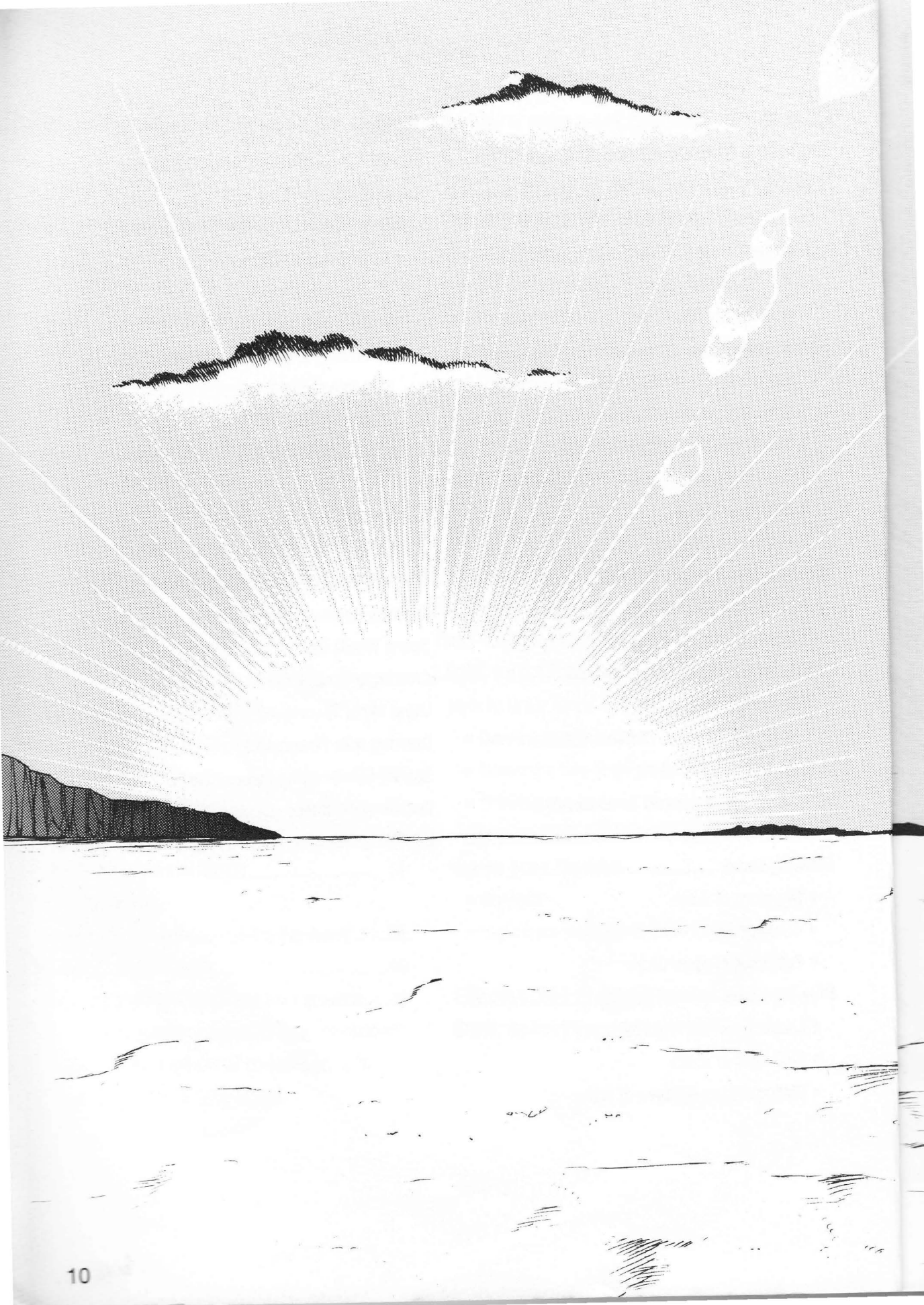
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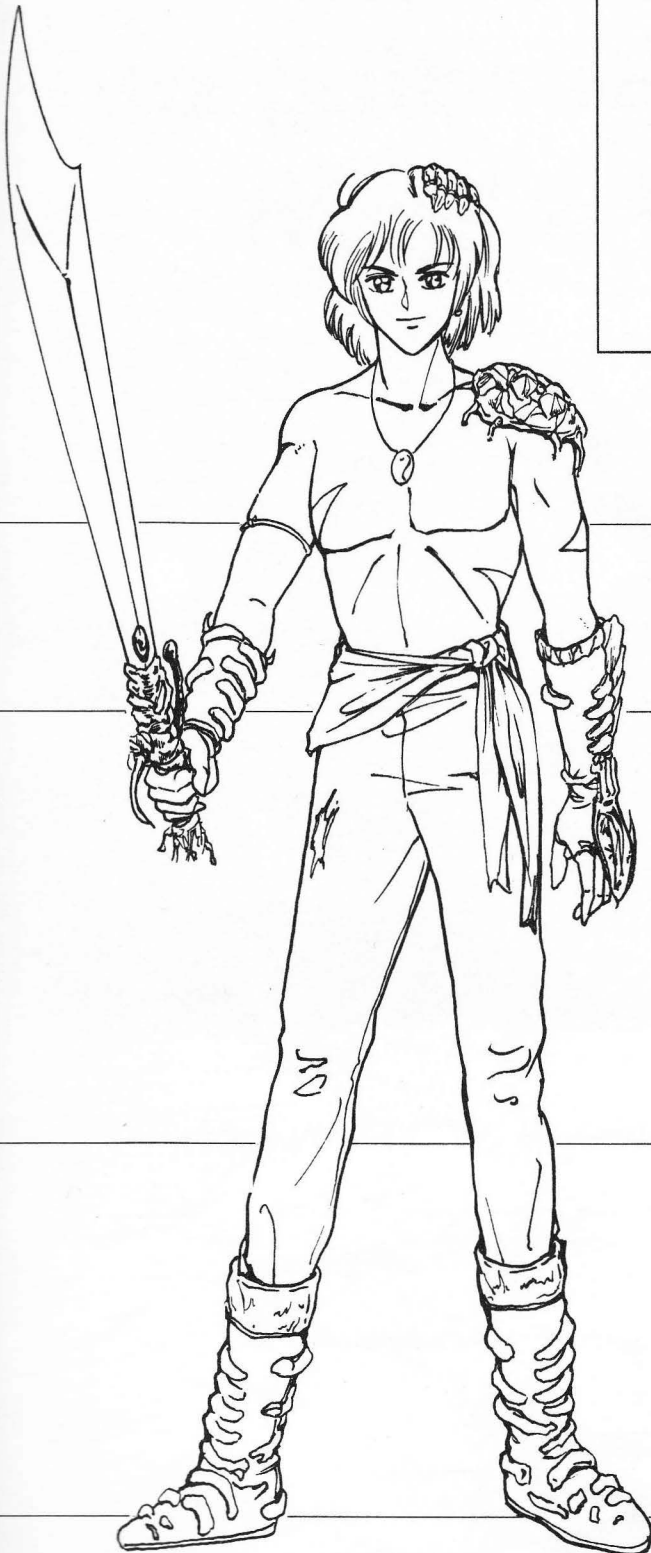


Chapter 1 — Basics

Standing on the Earth

Begin Drawing Backgrounds with a Single Horizon Line

When you want to draw a picture with the main character standing in a wasteland, draw a dividing line between the earth and the sky (horizon). All backgrounds begin with drawing of the horizon.



The expanse of the earth differs depending on the position of the horizon.

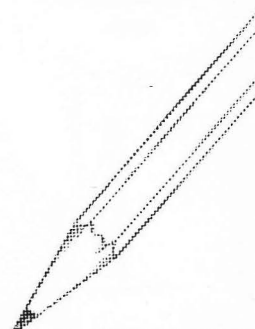
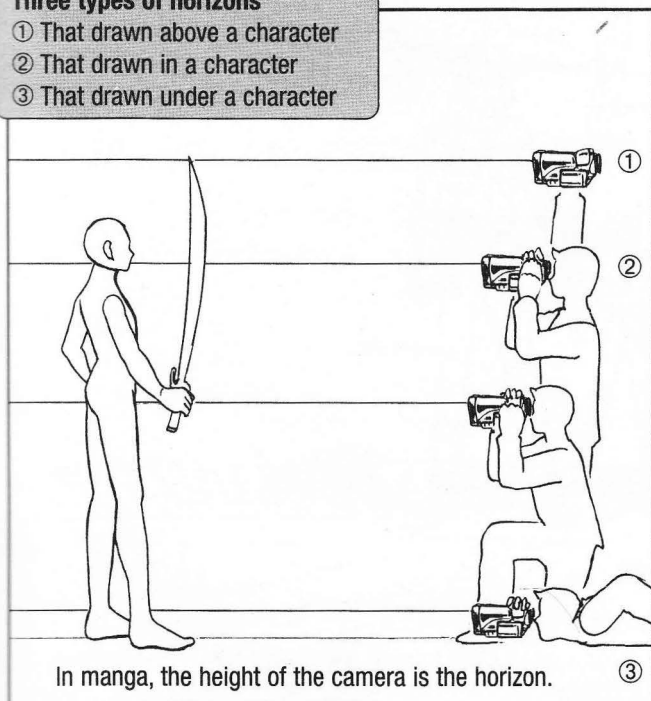
Column: In Japanese class, the dividing line between the earth and the sky is called chiheisen (horizon) and the dividing line between oceans and the sky is called suiheisen (horizon), but both are referred to as suiheisen in drawing.

Drawing manga is just like filming a movie.

When drawing the horizon, pretend like you are filming a movie and think about where you will hold the camera.

Three types of horizons

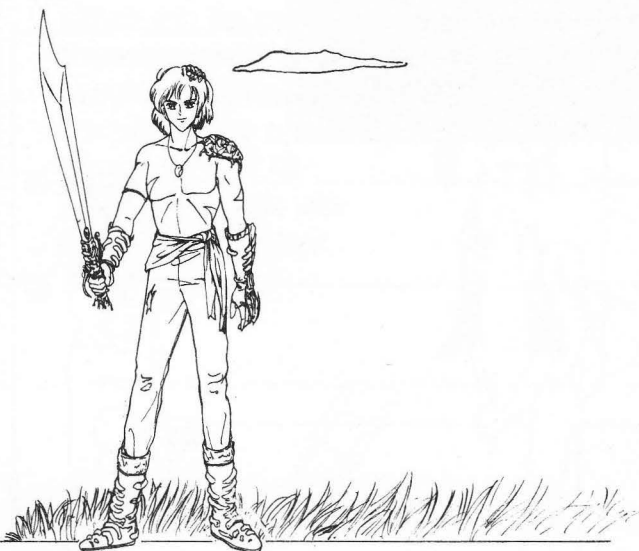
- ① That drawn above a character
- ② That drawn in a character
- ③ That drawn under a character



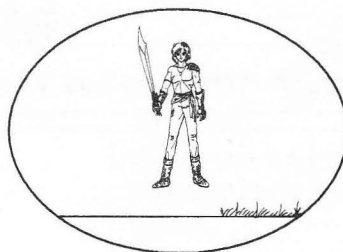
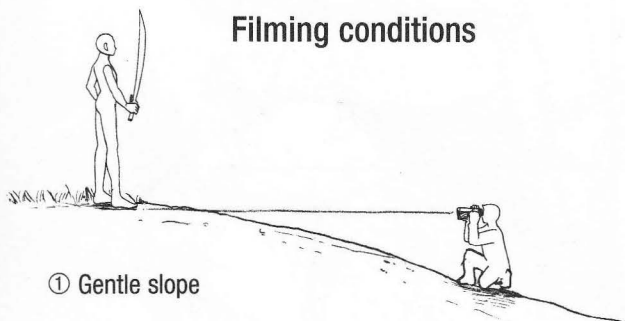
Column: Why is the horizon on land also called *suiheisen* in drawing? It is called *suiheisen* because it is a horizontal (*suihei*) line (*sen*).

1 Drawing the horizon below (foot level) a character

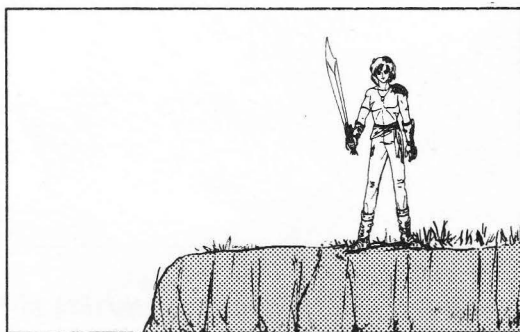
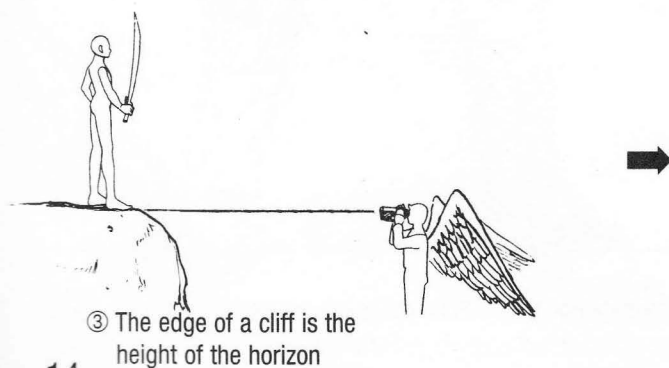
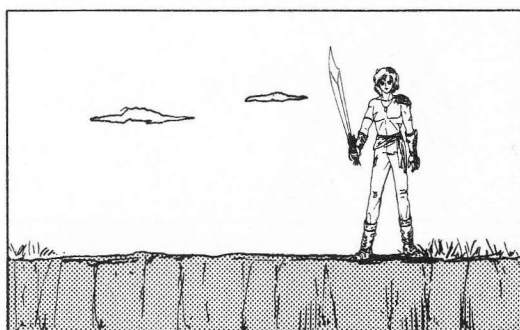
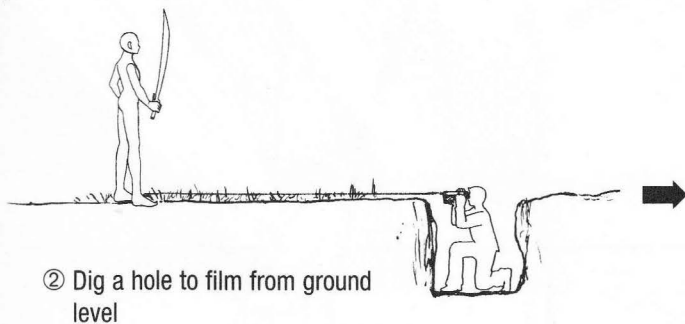
Drawing the horizon at foot level expresses the expanse of the wasteland. This is a low-angled composition.



Filming conditions

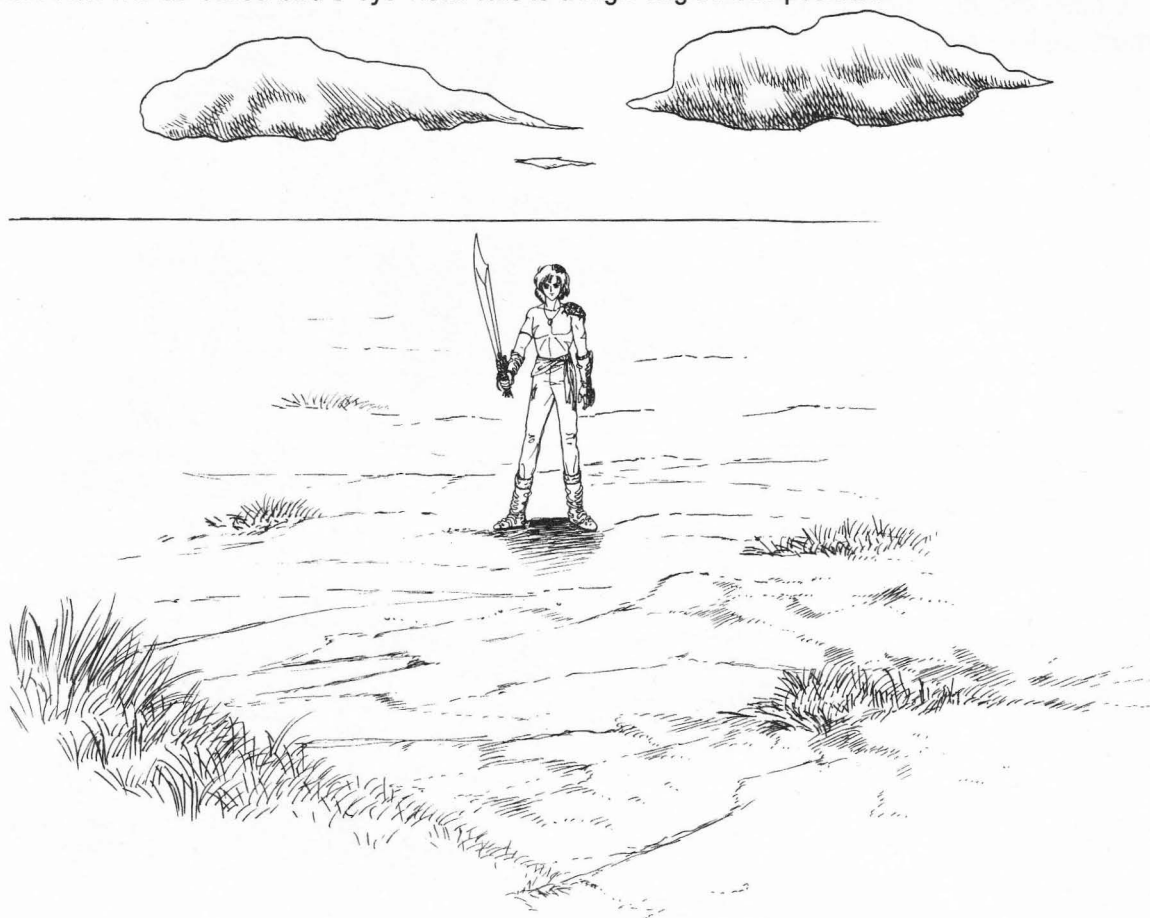


The character will float in the air when the horizon is drawn below foot level.

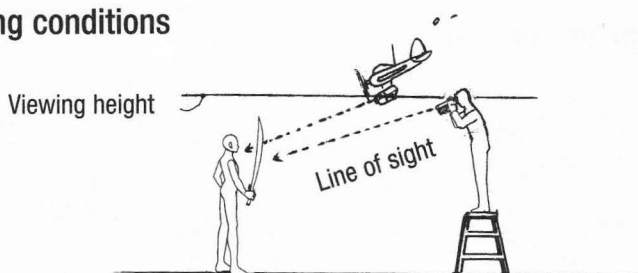


2 Drawing the horizon above (the head of) a character

Drawing the horizon above the head of a character creates the sensation of looking down on the character. The so-called bird's-eye view. This is a high-angled composition.



Filming conditions

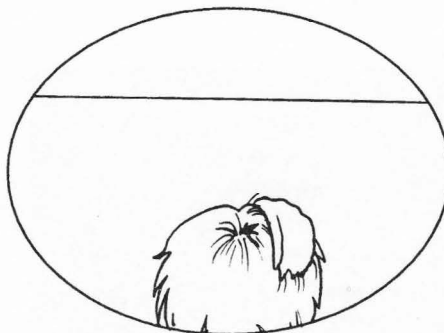


Filming from radio-controlled airplane or stepladder

Actually looking down on person (bird's-eye view of character)

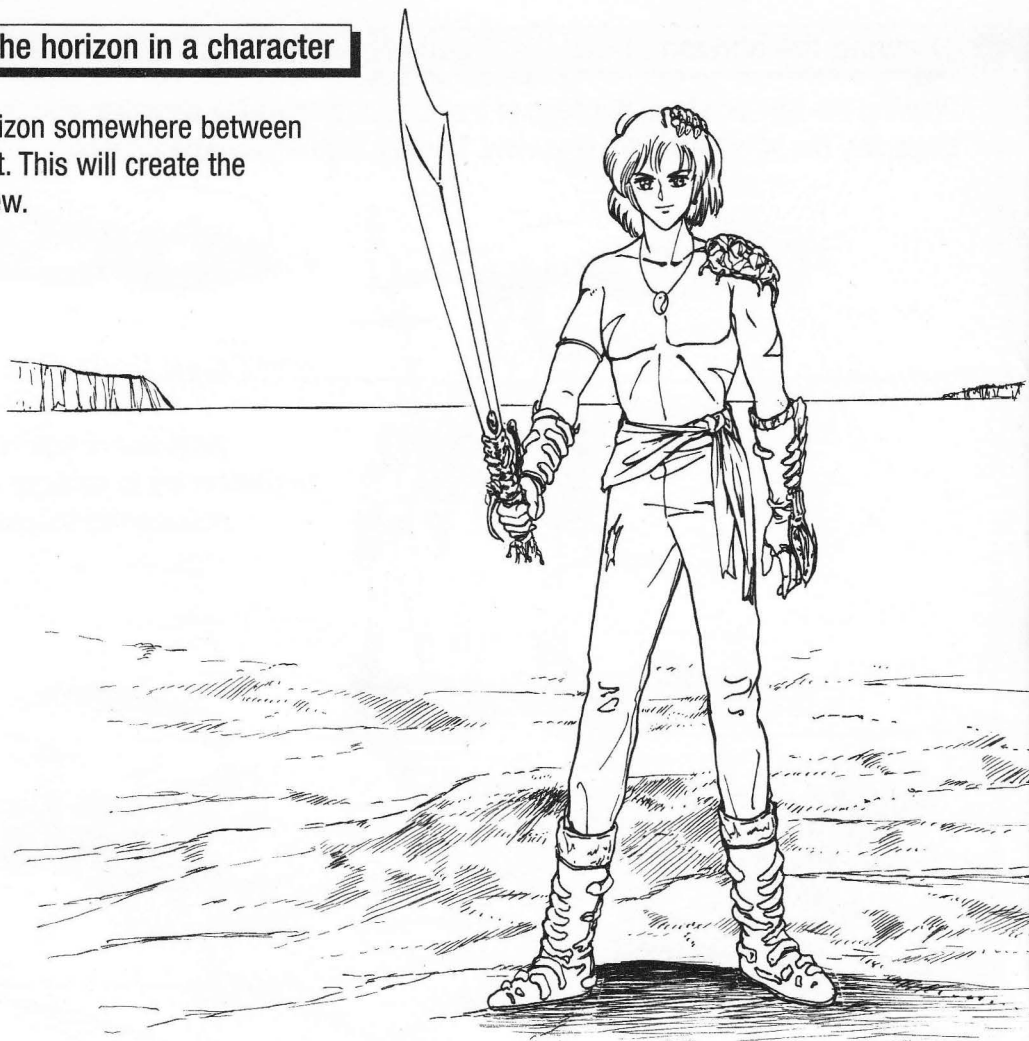
Bird's-eye view and the horizon

When you take a picture from the normal bird's-eye view (looking down), you cannot see the entire character when you attempt to include the horizon. About all you can see is some of the character's head. In real life, you cannot film the entire body of a character and the horizon unless you film from a high place that is far away.

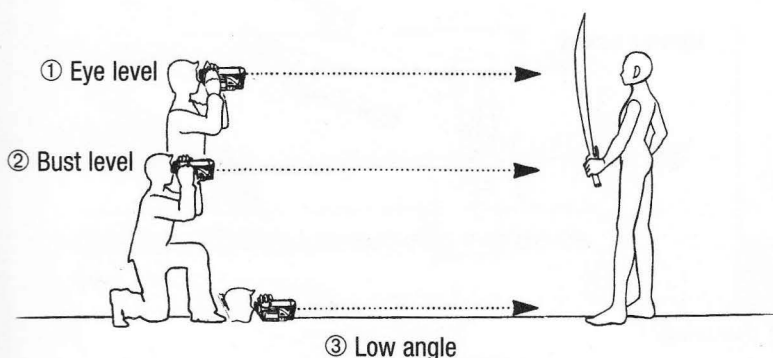


3 Drawing the horizon in a character

You draw the horizon somewhere between the head and feet. This will create the most ordinary view.



Filming conditions



Manga are drawn at eye level

Eye level? It means the height you are viewing. The objects we see every day are all at our own eye height. Manga are drawn at eye level because that is what we are used to. Draw the horizon line at the face of a character. It is the same as focusing on someone's face when taking a photograph.

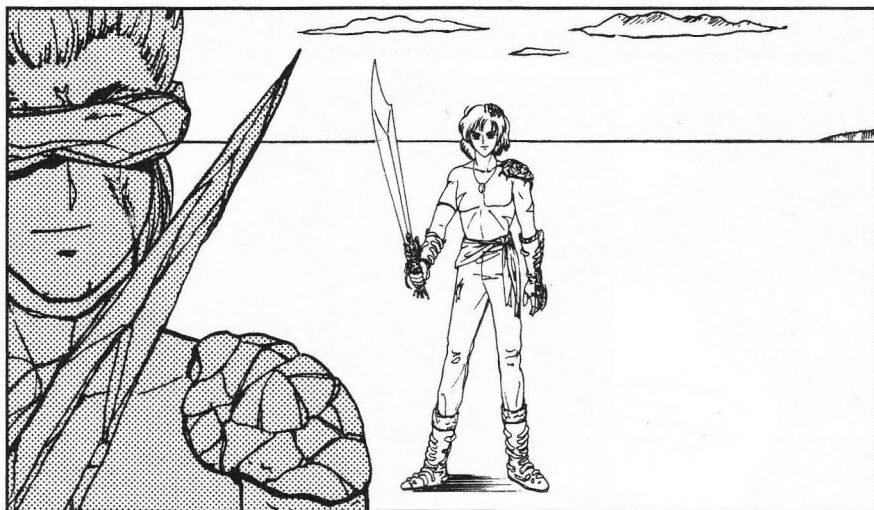


Bust shot

Upper body of character from eye level. This is a typical manga composition. The horizon is at face (eye) level.

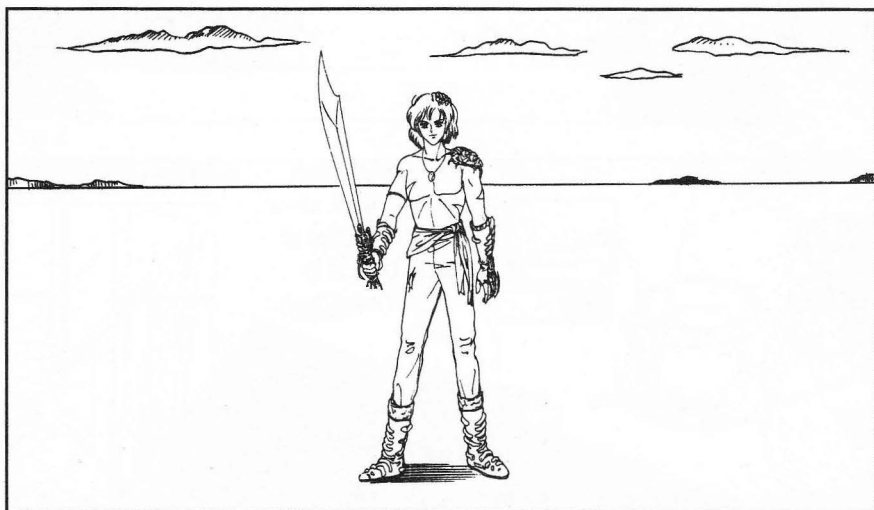
1. Eye level (face height)

- This is often used in scenes with dialogue.
- Draw the horizon at eye level when a character is moving in this direction or for close-ups of the face.



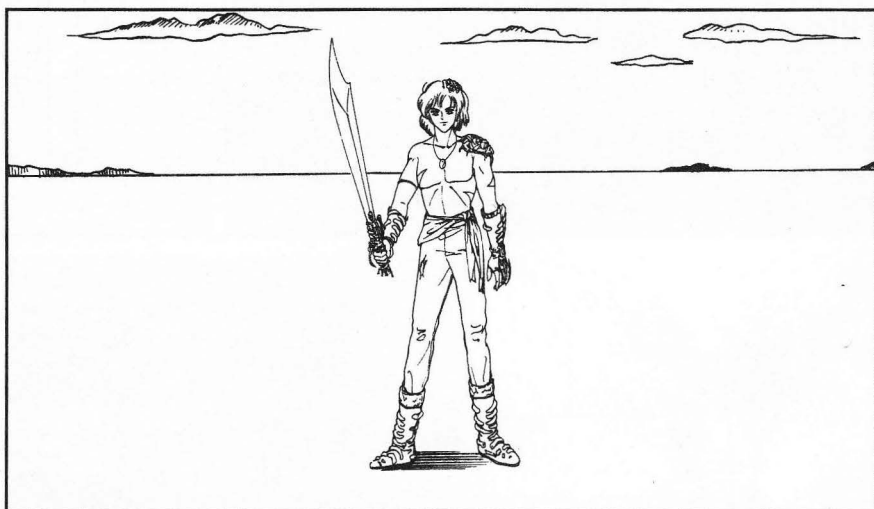
2. Bust level

- This is often used for full-body shots.
- Draw the horizon at bust height when drawing the entire body (down to feet).



3. Low angle

- This is often used for dramatic presentation.
- Draw the horizon below the knees of a character when you want to make a strong impression or give the picture a sense of depth or vastness.



Here a character between a close-up of feet in the foreground and a character in the distance create a good sense of depth.

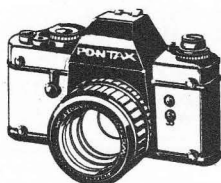
Presentation: Long shots and close-ups

Think of the difference between long shots and close-ups as a difference in camera work (presentation).



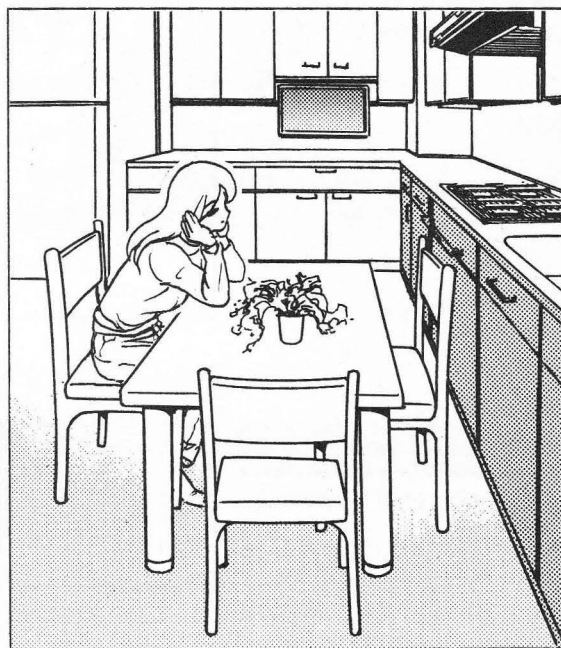
Long shots

A cut using a long outdoor shot



There isn't much need to think about the perspective of small objects in scenes using long shots.

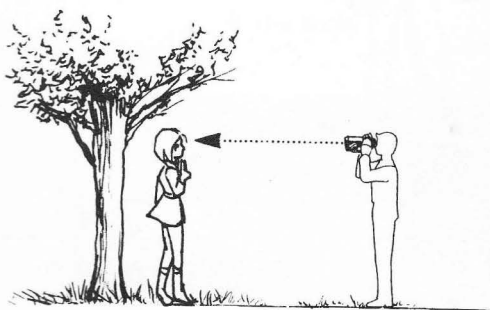
Kitchen



Long shots

A long shot is a distant view. It is a form of presentation that makes it look like you are viewing an object from far away. Long shots are also used when you want to fit both characters and background into one picture.

Use long shots (viewed from a distance) both indoors and outdoors when you want to show the entire body of characters. Long shots are often used for scene changes.



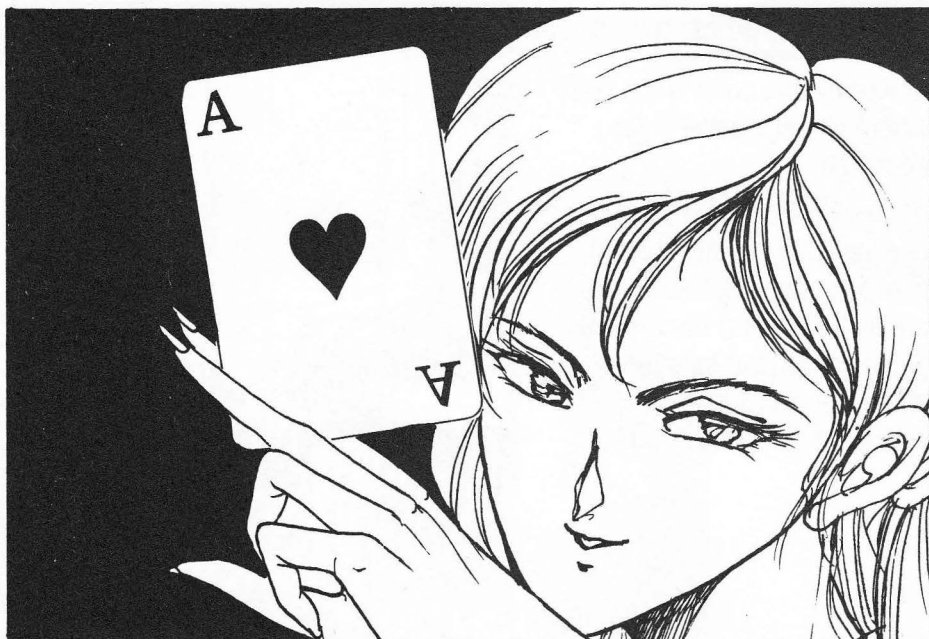
Long shot...zoom out



Close-up...zoom in

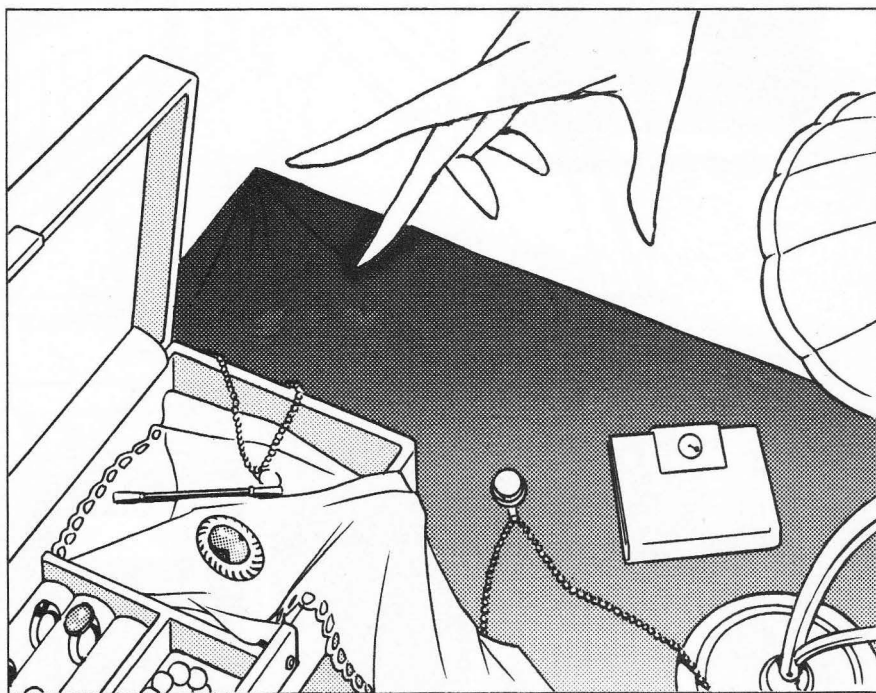
Close-ups

Close-ups are used to present hands or small objects.



Advice

Use a long shot when you want to illustrate something with an overall view. Use a close-up when you want to emphasize one part.



Close-ups

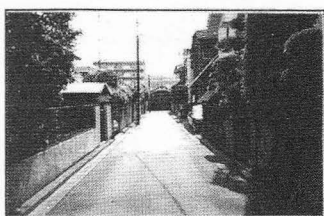
- A close-up is the presentation or technique of showing an object up close or magnified.
- Close-ups are used when you want to clearly show a specific small object or a part of a character.
- An extreme perspective is sometimes used to make a strong impression.
- A picture using an extreme perspective is called a wide angle (wide angle expression).

Column: Technically, wide angle is a word used in photography. A thicker lens than usual is used to make an impressive effect by making a picture extremely distorted.

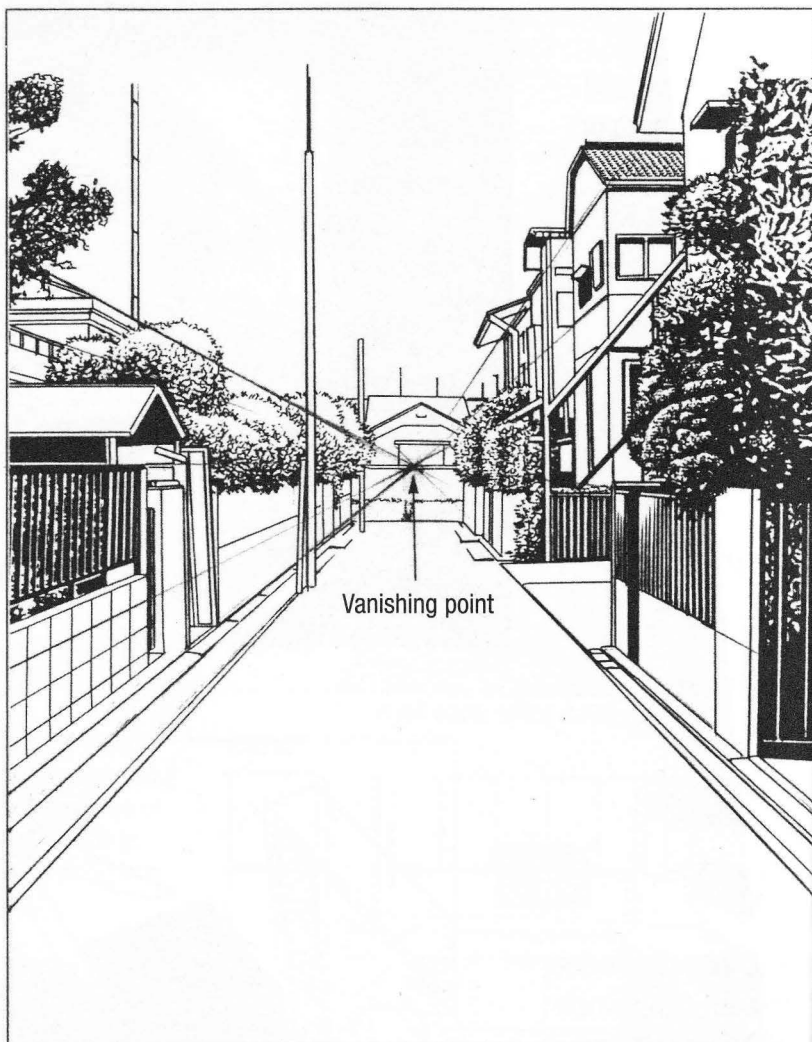
Vanishing point

The vanishing point is the point where all perspective lines converge.

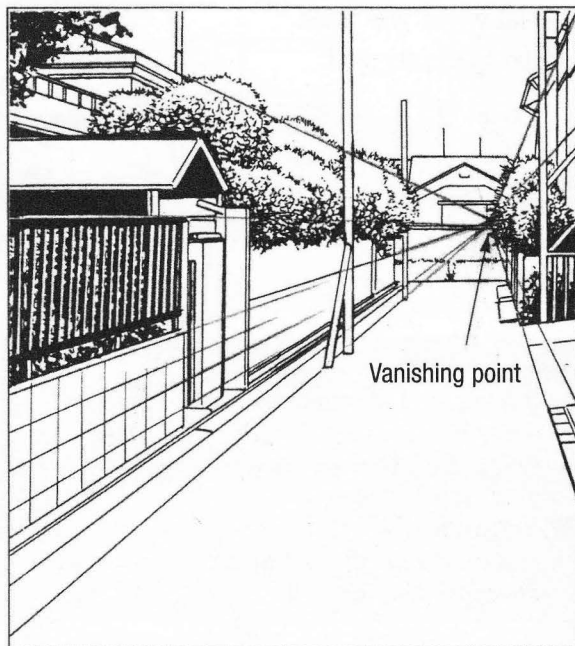
A drawing technique that uses one vanishing point is called one-point perspective. There are also two- and three-point perspectives, but let's learn about the vanishing point using one-point perspective first.



Photograph used for reference

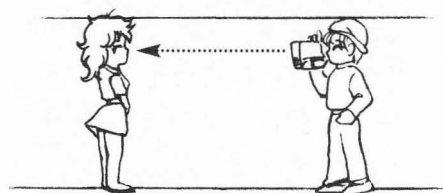
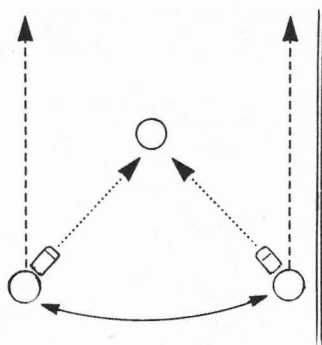


Changing the position of the vanishing point changes how the sides look.

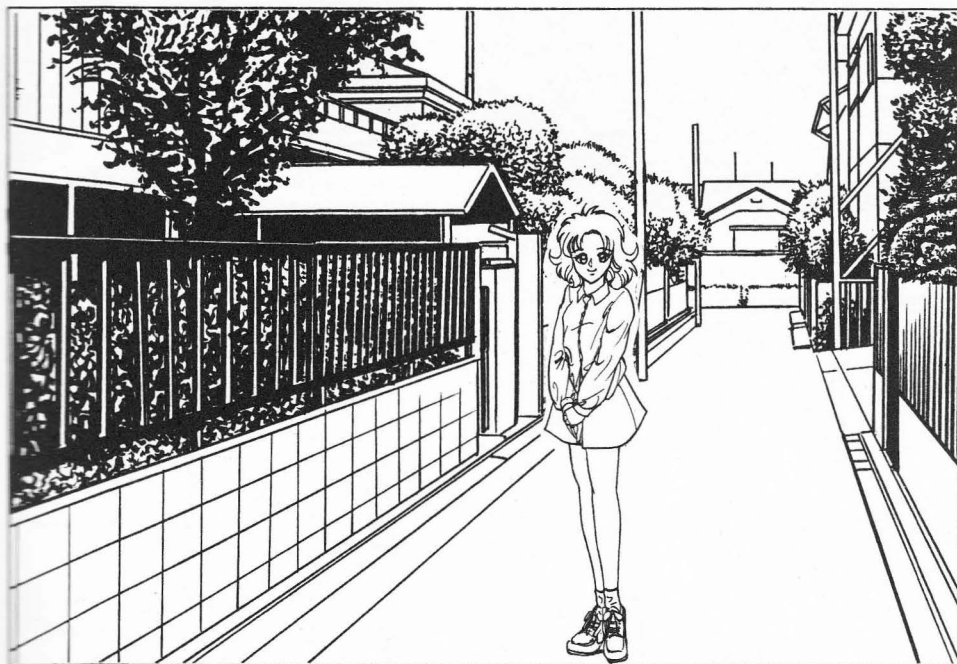


Column: When you draw a building, for instance, think about whether you want to see the building from the right or from the left. If you want to see the building from the right, place the vanishing point in the position shown in the right frame.

Imagine you are taking a picture. If you stand directly in front of your subject, the vanishing point is in the middle. If you move to the right, the vanishing point moves to the right as well.



Side view



This is taken from the right side of the road. You can see more of the wall on the left side.



Vanishing point

- Location
On the horizon line
- Nature
All perspective lines converge on it

This is taken from the left. You can see more of the right side of the road.

Simple way to pick a vanishing point

When you want to draw a simple building roof or other objects behind characters, use one-point perspective. The vanishing point could be in a variety of positions, depending on the diagonal lines of your outline. Pick a vanishing point by choosing an angle you like.



Subject



Completed drawing

Process

1. Draw outline



2. Draw horizon



Horizon

3. Pick vanishing point



Vanishing point

Column: Once you have picked a vanishing point, draw a rough sketch. Ignore the other perspective lines of the outline and draw all the lines in the direction of just the one vanishing point.

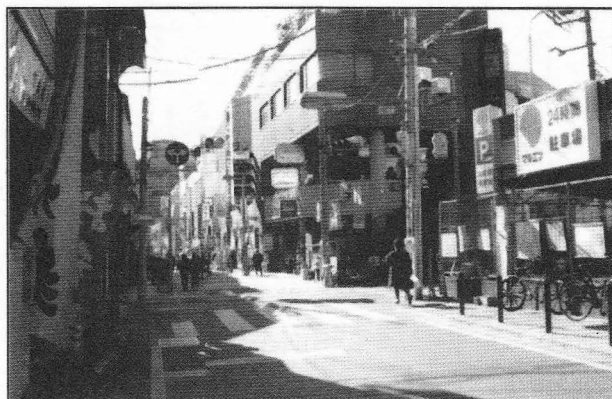
Regarding background and perspective, once you get used to this, you can begin drawing a rough sketch by first picking a horizon and a vanishing point when drawing the outline of the image.

Extend diagonal line of outline.
The point where it meets the horizon line becomes the vanishing point.

How to Draw in One-Point Perspective

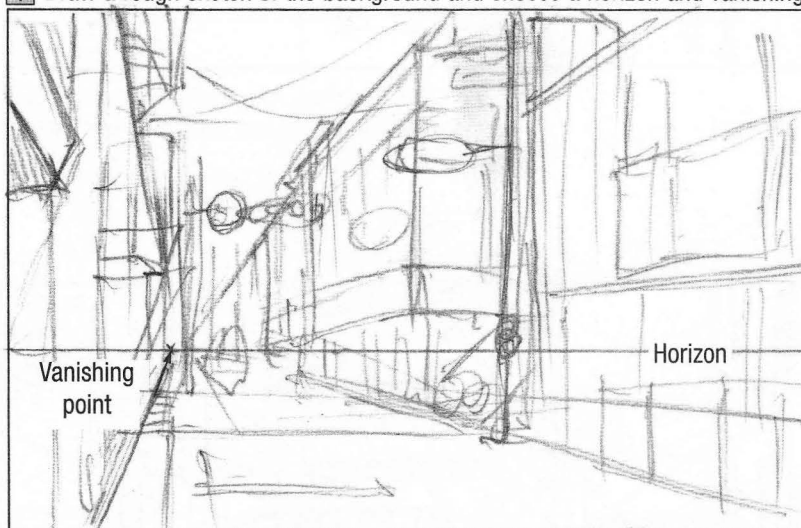
Let's Try Drawing while Looking at a Photograph

When drawing backgrounds, artists often refer to photographs that they have taken. Perspective drawing is the most efficient way to produce a good drawing, so let's get comfortable with it.



Reference photograph

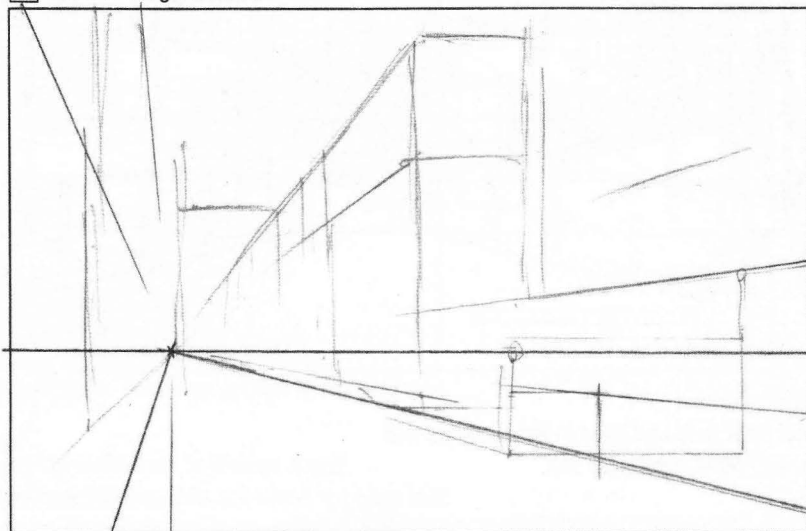
- 1 Draw a rough sketch of the background and choose a horizon and vanishing point.



Make a rough drawing of the photograph while noting the depth lines of buildings and the road.

It is important to grasp the overall picture.

- 2 Draw a rough sketch.

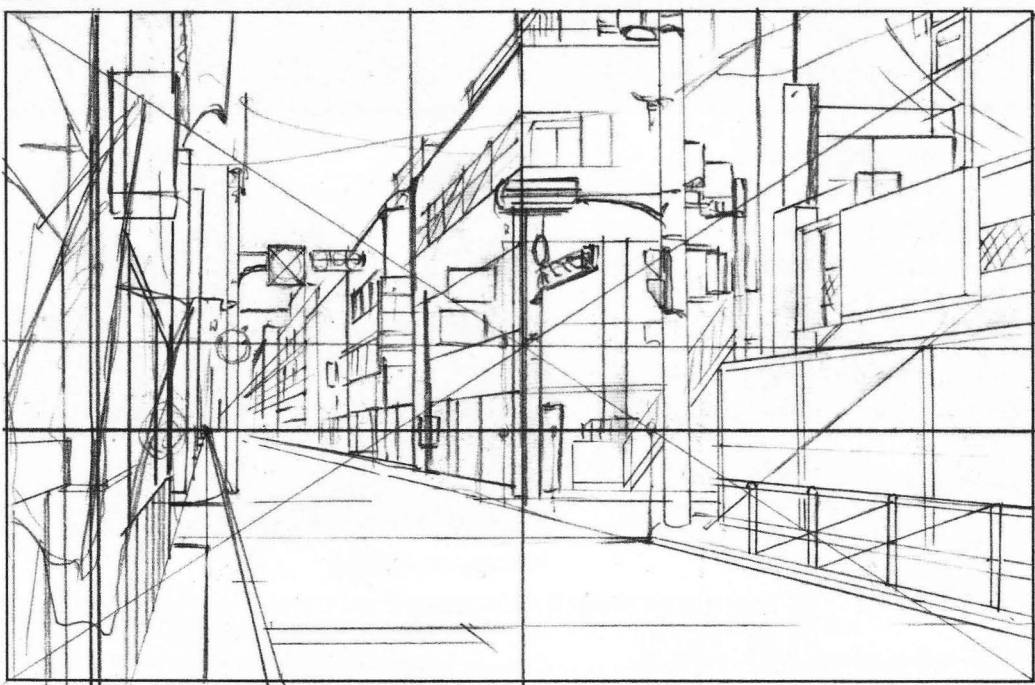


First choose the road lines.

When drawing the background, simplify and omit parts depending on your tastes and needs (note that the photograph is used for reference only).

Column: Horizon and vanishing points — In photographs the vanishing point is often not clear. It is important that you choose a clear horizon and vanishing point for your drawing.

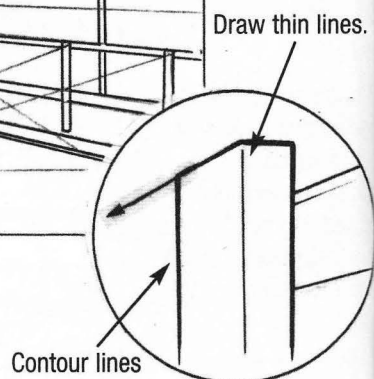
3 Completed rough sketch



4 Pen drawing



Start with the foreground.
Make foreground lines bold and lines in the distance thin.
Leave windows and other details for last.



Drawing thin non-contour lines creates a three-dimensional effect.

5 Completion of pen drawing, erasing and applying white-out



Erase completely after finishing the pen drawing.
Correct protruding lines and other anomalies after erasing.

6 Applying tone/completion



Do not use solid colors if you want to create an overall white drawing
with a light feeling.

The drawing is complete. Lightly apply tone to shaded areas.

Think about where the light (sun) and shadows are when applying tone.

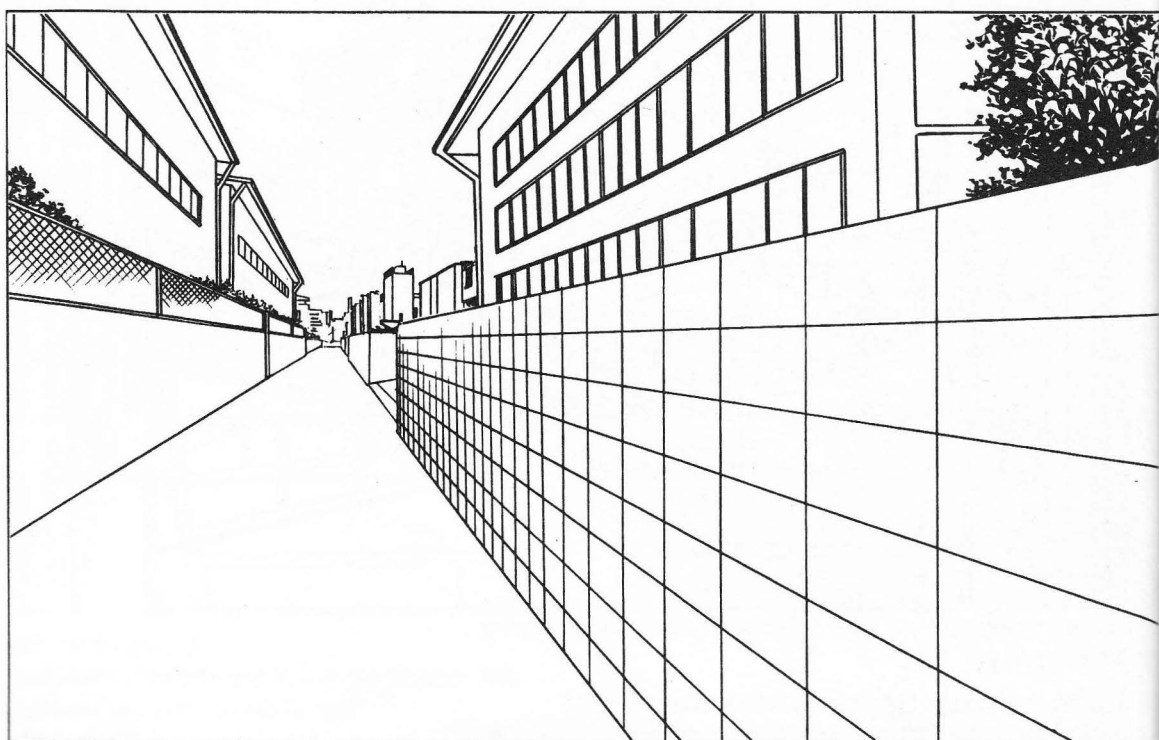
Generally, tone is applied under the eaves and to the sides of buildings.

Drawings suited to one-point perspective

One-point perspective is short for "one-point perspective drawing." This technique is suited to drawing indoor scenes and creating a sense of depth.



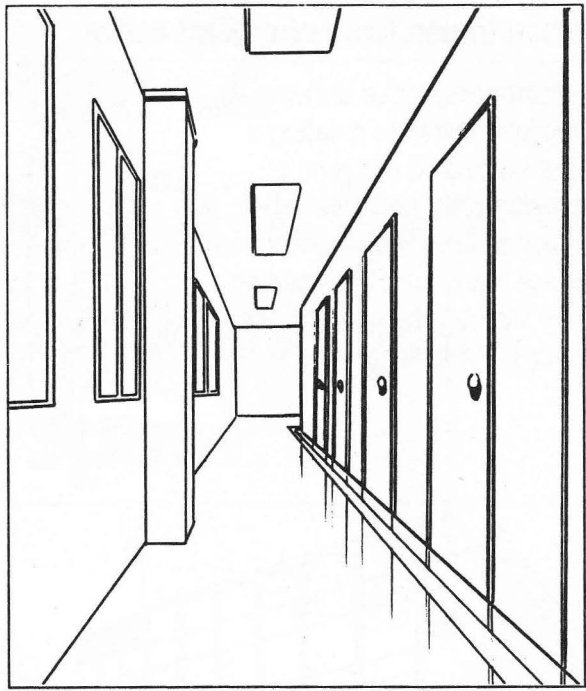
Road (main road and side roads, etc.)



Road with wall and buildings with windows, etc.



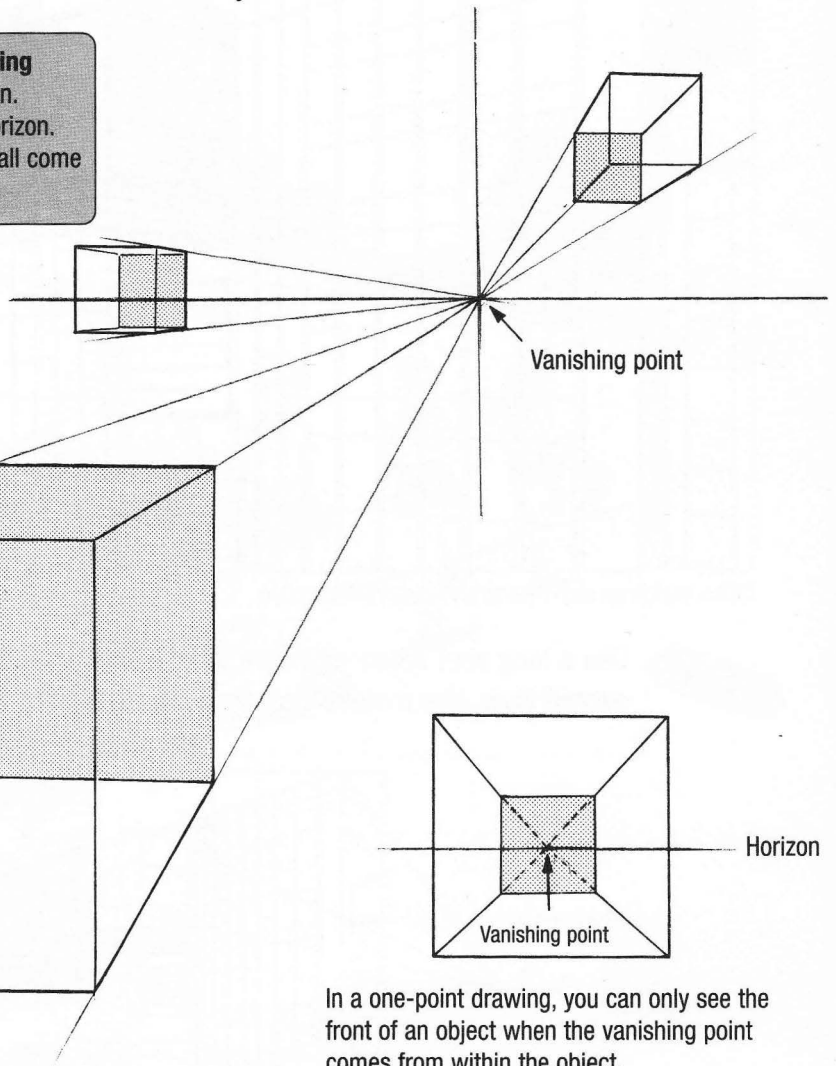
Indoors (partial depiction)



Hallway

Features of one-point perspective drawing

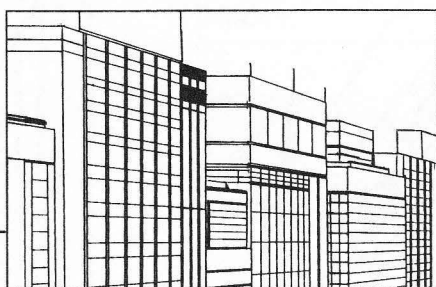
- Horizontal lines are parallel to the horizon.
- Vertical lines are perpendicular to the horizon.
- Diagonal lines expressing depth (width) all come from a point on the horizon.



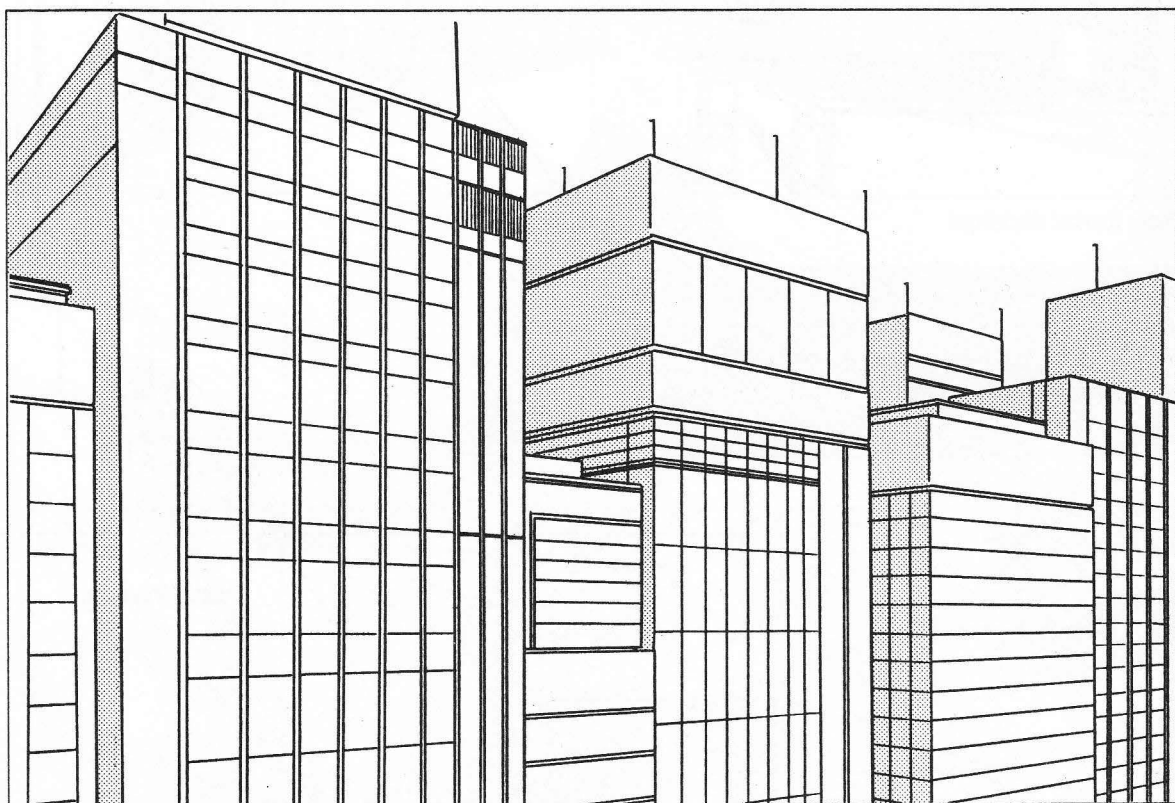
In a one-point drawing, you can only see the front of an object when the vanishing point comes from within the object.

When to use two-point perspective

Two-point perspective drawing is a technique suited to creating a three-dimensional effect or a demanding presence. Use two-point perspective drawing when there are many buildings standing side by side or when you can see two sides of buildings.



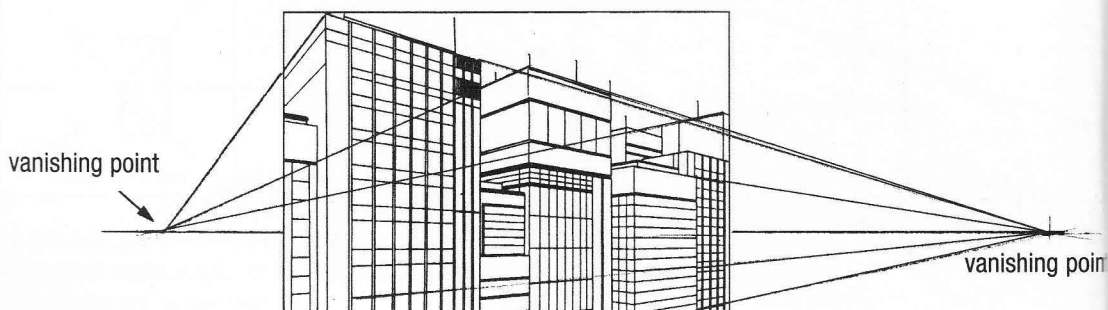
Office buildings drawn with one-point perspective



Office buildings drawn with two-point perspective

Advice

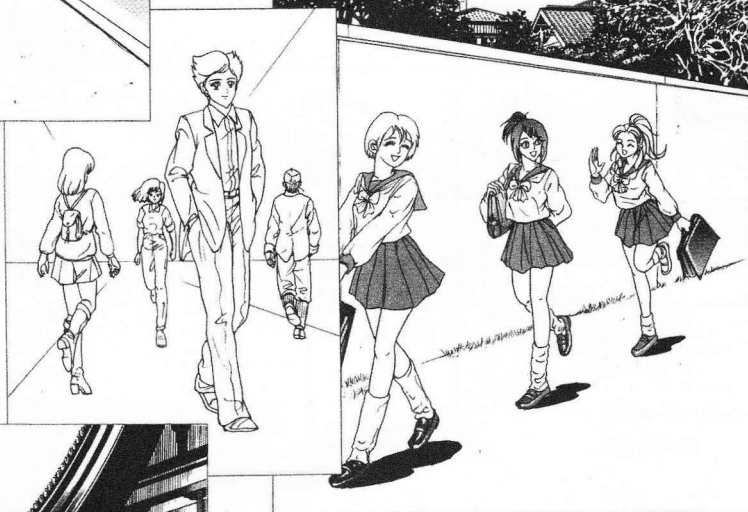
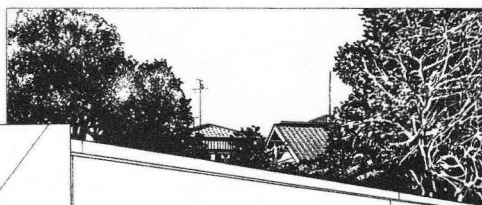
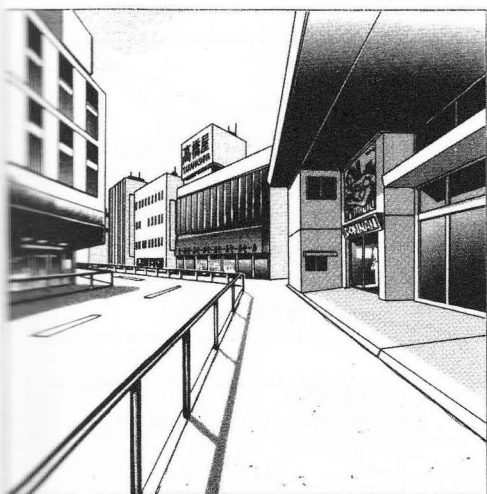
Use a long shot when you want to illustrate something with an overall view. Use a close-up when you want to emphasize one part.



Chapter 2

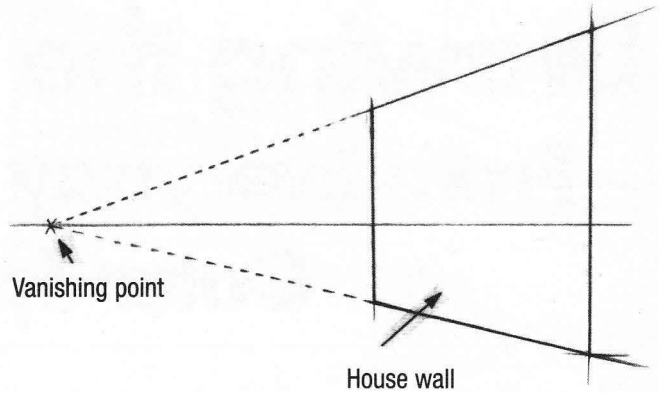
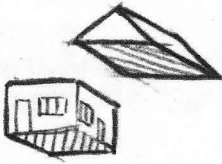
Drawing the Outdoors

From Everyday Scenery to Outer Space

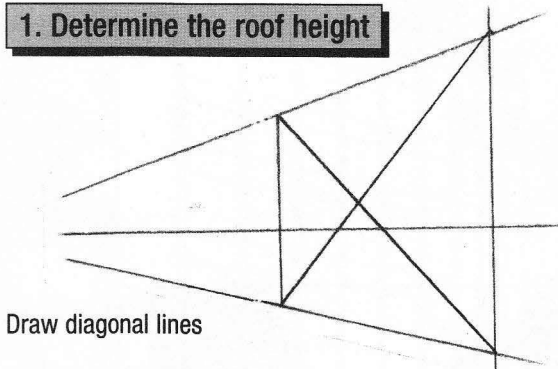


How to Draw a Roof

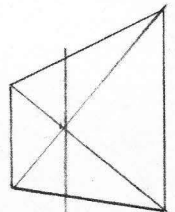
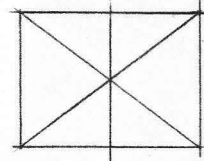
Think of a roof as being on top of a box. Anybody can draw a roof as long as you know the height and how the eaves overhang.



1. Determine the roof height

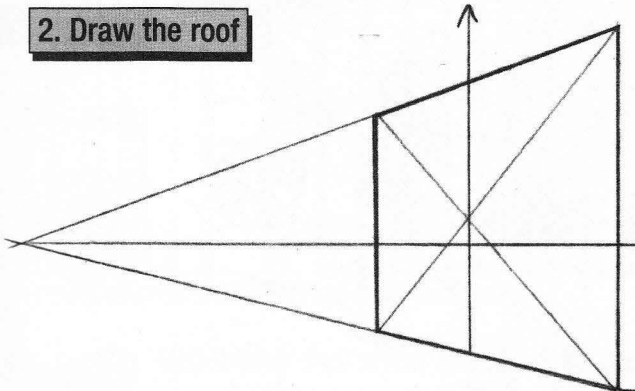


The "center" of the wall



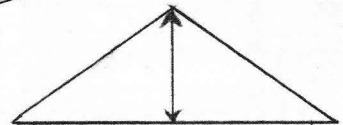
In the case of a square, the point where the two diagonal lines intersect is the center.

2. Draw the roof

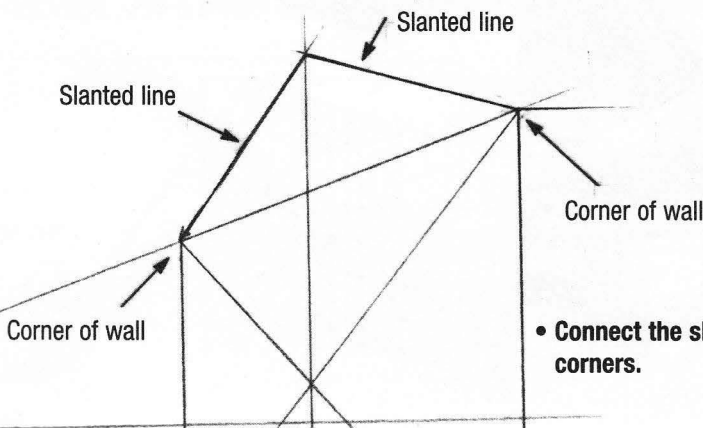


Point

Roof height

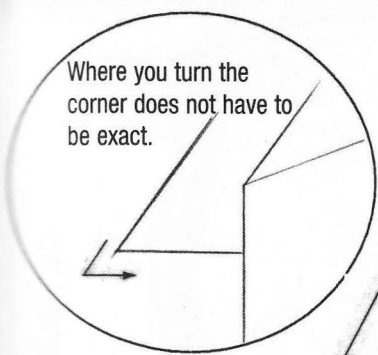


Determining the roof height...
Draw a vertical line from the center of the wall. It can be whatever length you prefer (the longer it is, the steeper the angle of the roof will be).

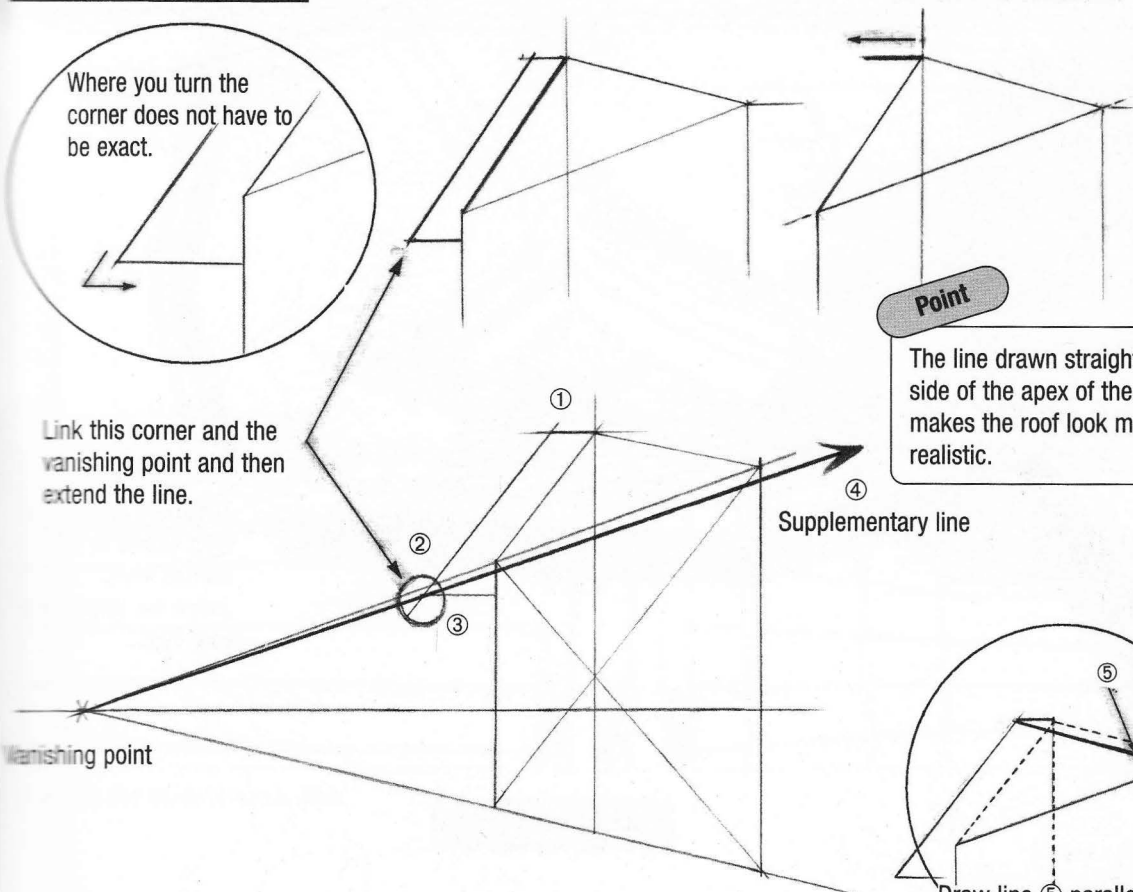


• **Connect the slanted lines with the wall corners.**

3. How to draw eaves

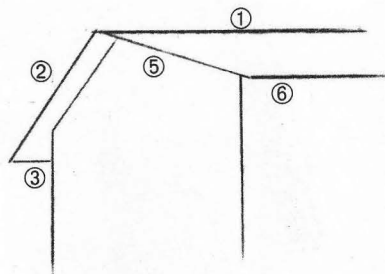
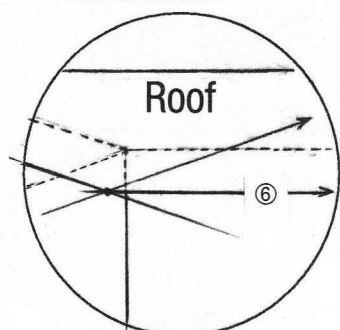
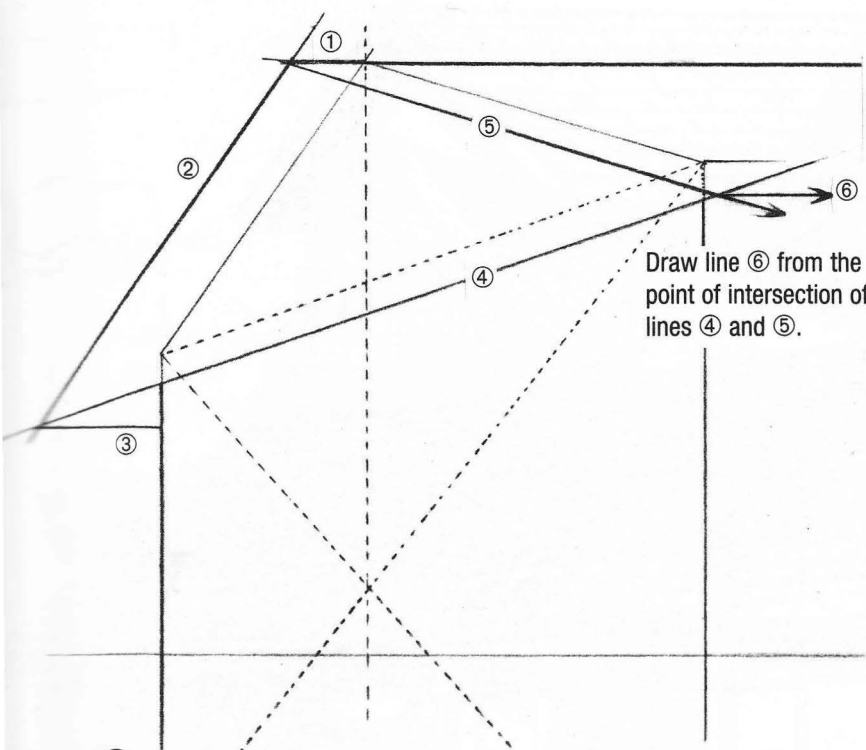
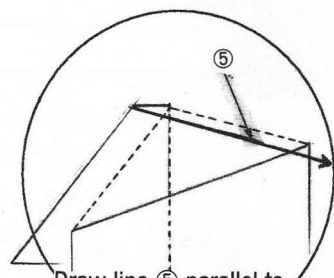


Link this corner and the vanishing point and then extend the line.



Point

The line drawn straight to the side of the apex of the roof makes the roof look more realistic.

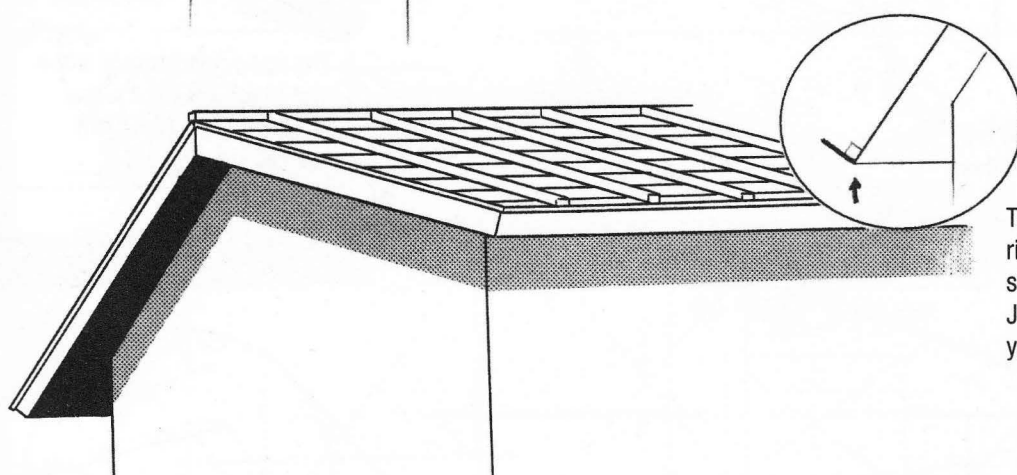
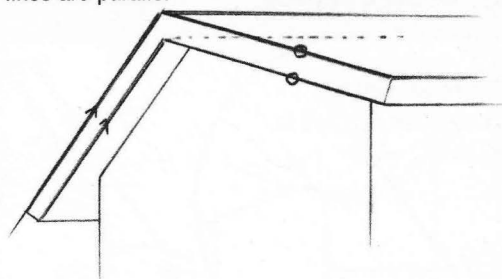
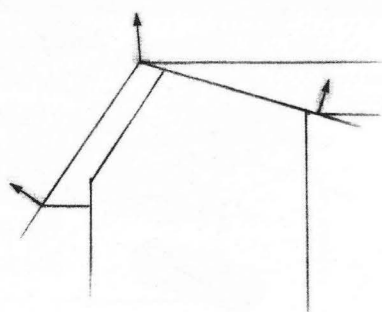


Advice

Line 6 can be drawn only after the supplementary line 4 has been drawn.

4. Making the roof thicker

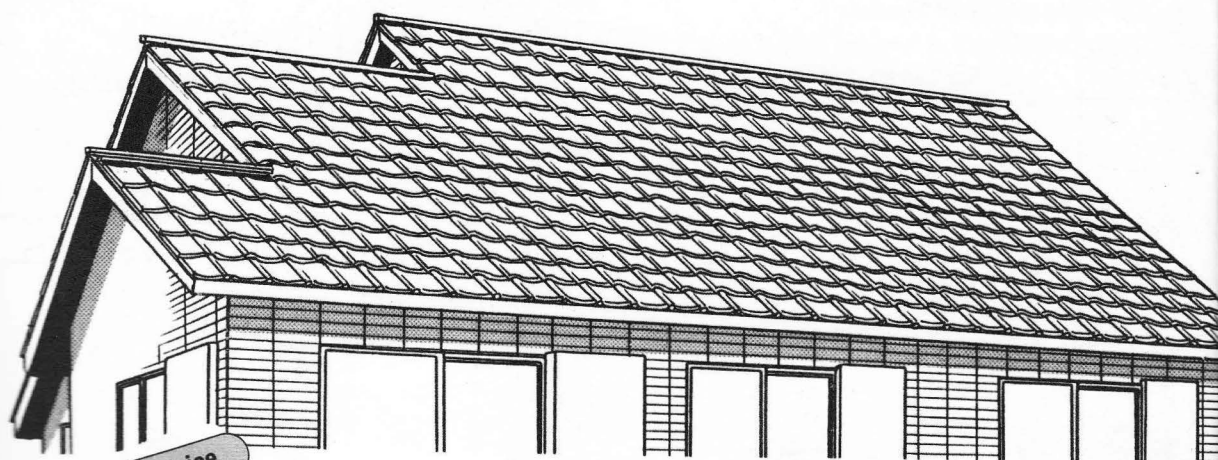
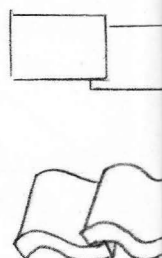
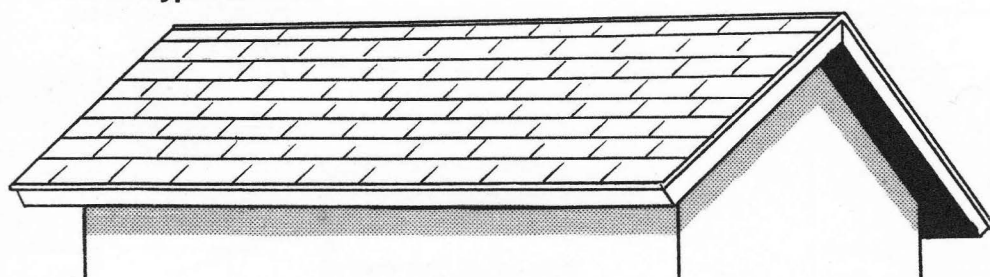
All lines are parallel



Thickness lines are at right angles to the slanted lines. Judge the length with your eyes.

Completed roof

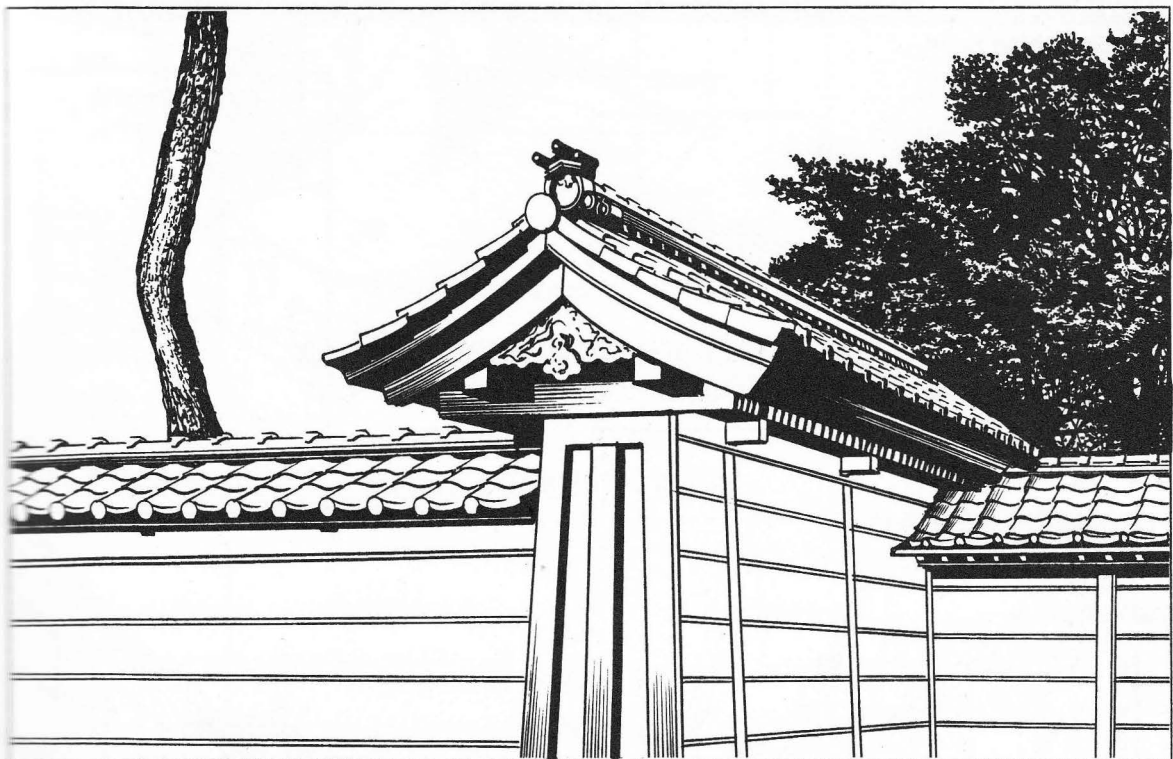
Different types of roofs



Advice

Draw shadows under the eaves.

You can draw these kinds of roofs with this technique.

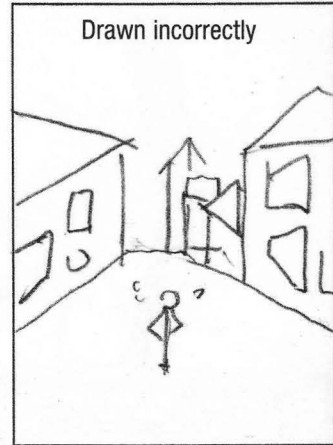
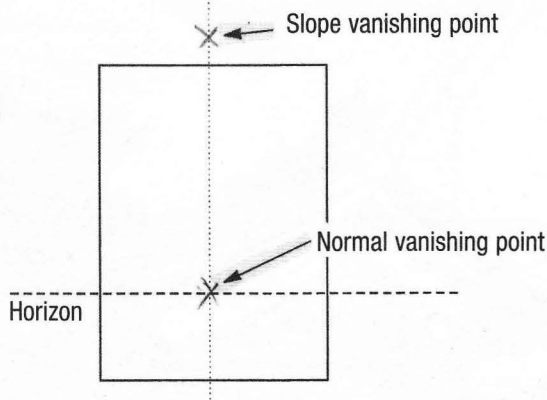


A wall in the samurai house style.



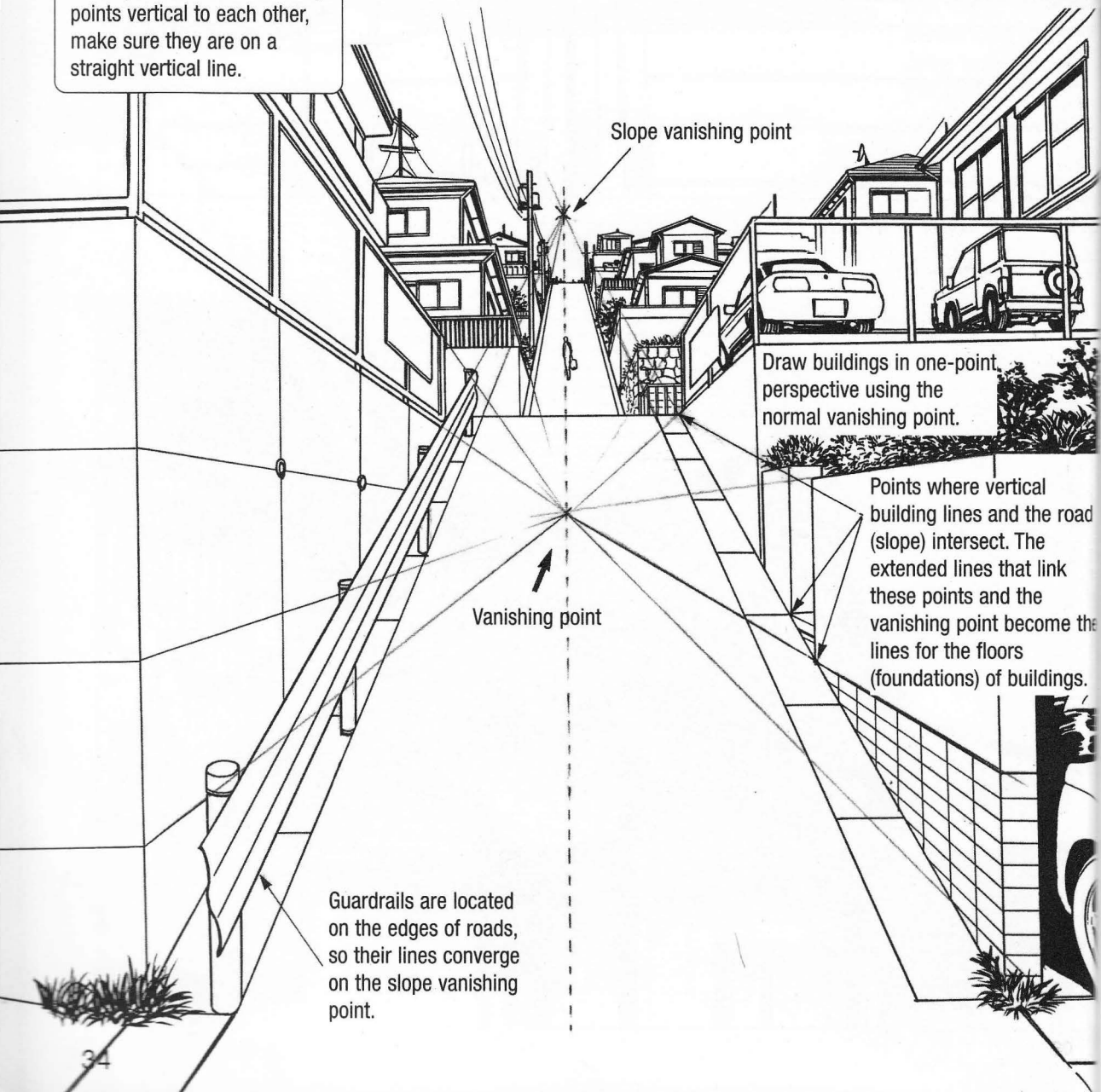
How to Draw Slopes

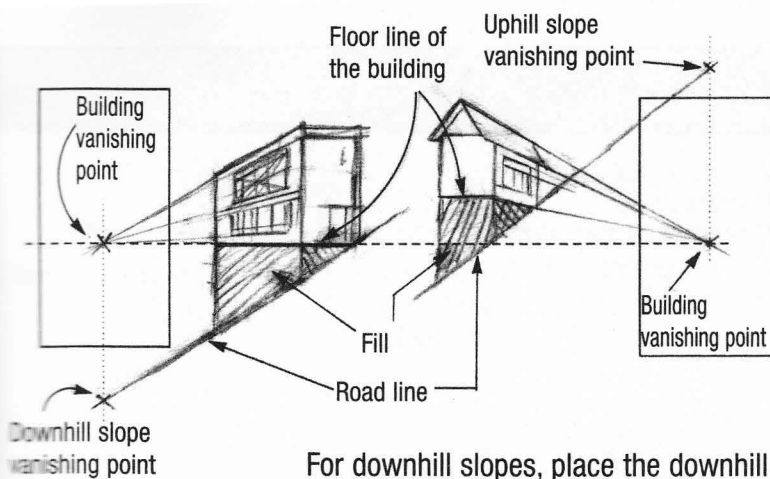
Create a vanishing point for slopes in addition to the normal vanishing point on the horizon line. Buildings are drawn based on the normal vanishing point, while slopes are based on the slope vanishing point.



Point

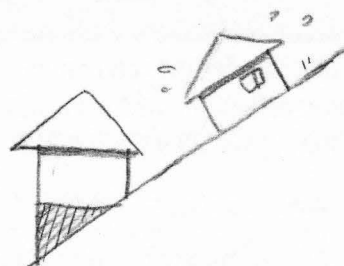
When you draw two vanishing points vertical to each other, make sure they are on a straight vertical line.





For downhill slopes, place the downhill slope vanishing point below the horizon.

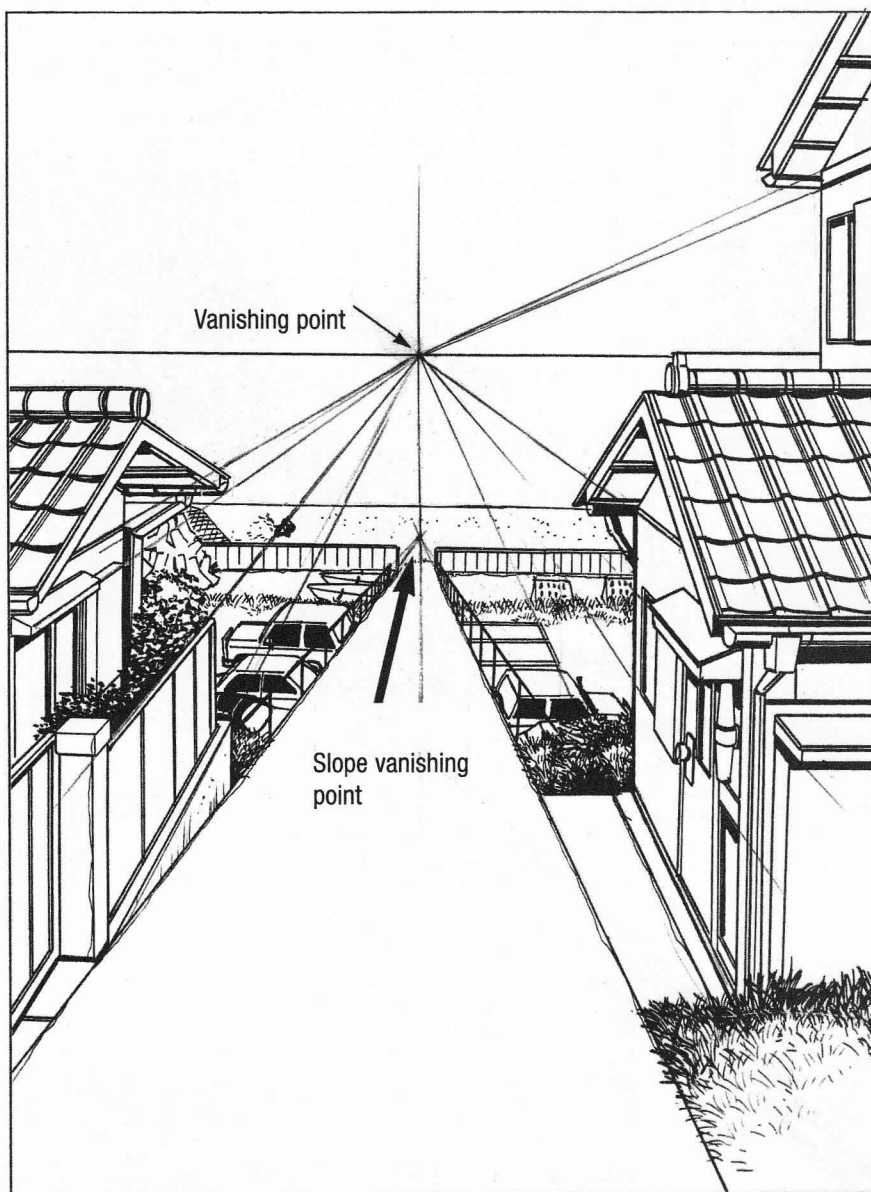
Houses are not built slanted



When drawing a house on a slope, it is important to draw a foundation so that the house will stand straight up. Express a slope by the difference between the road line and the floor line of the building.

Advice

Create a vanishing point for slopes in addition to the normal vanishing point.

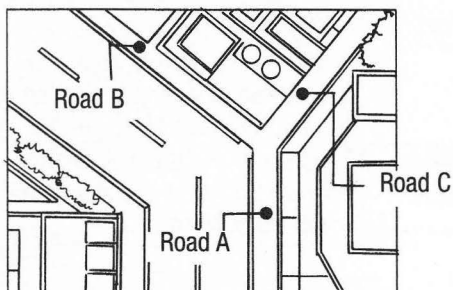


Column: Characters on slopes — Draw characters above the horizon as if you were looking up at them and characters below the horizon as if you were looking down on them.

How to Draw Forked Roads

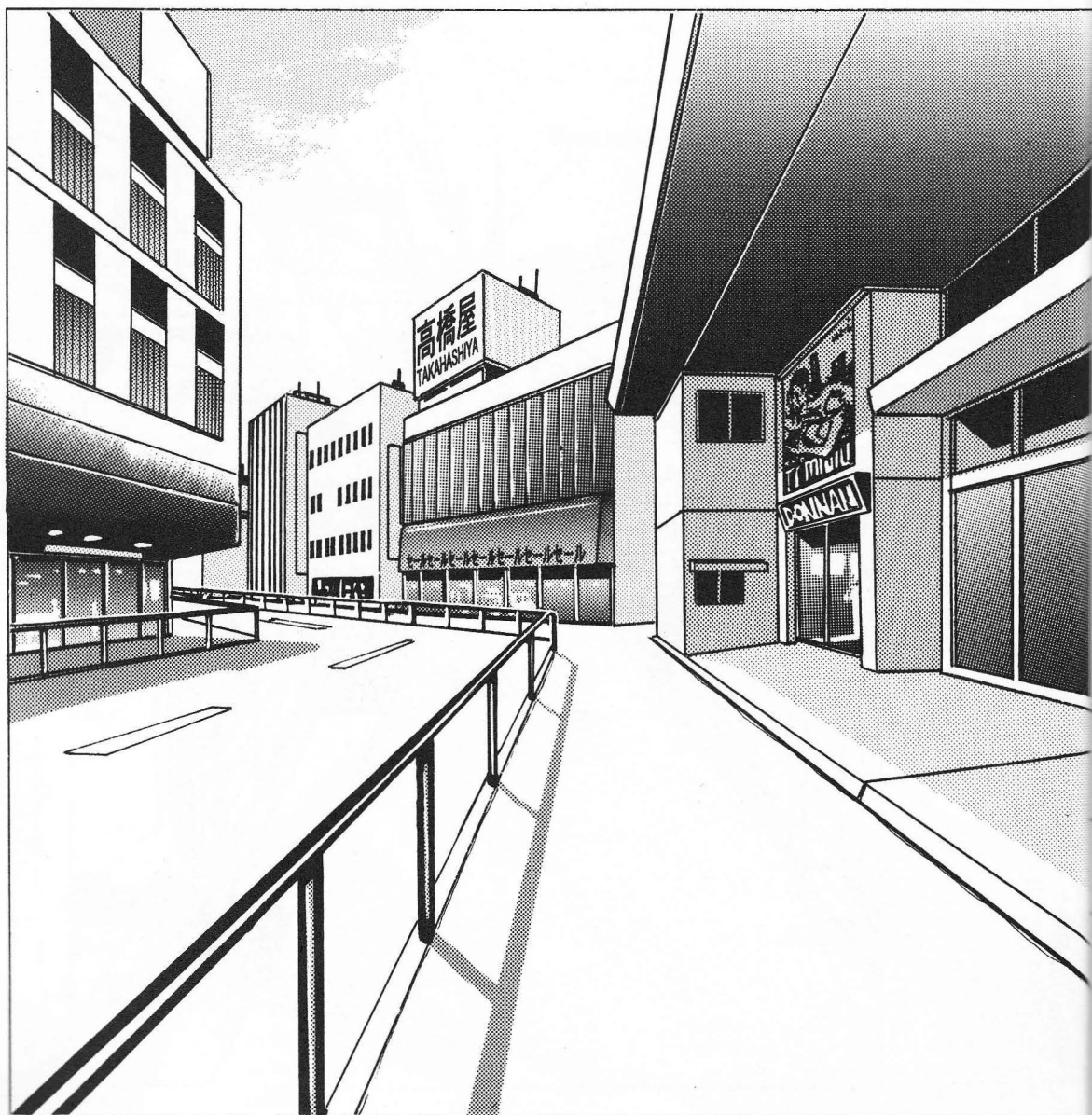
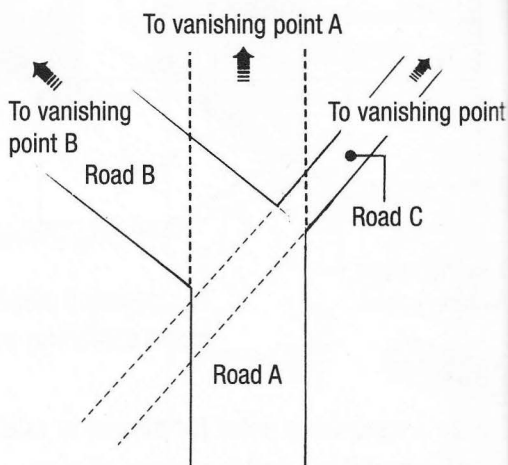
Think of a forked road as an intersection of two roads with differing vanishing points.

Aerial photograph

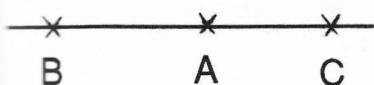


Roads B and C intersect at a right angle

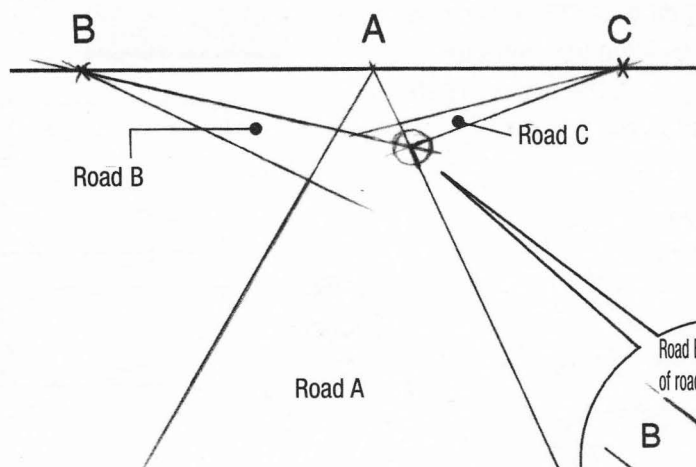
Vanishing point A of a straight road
Vanishing points B and C of branching roads



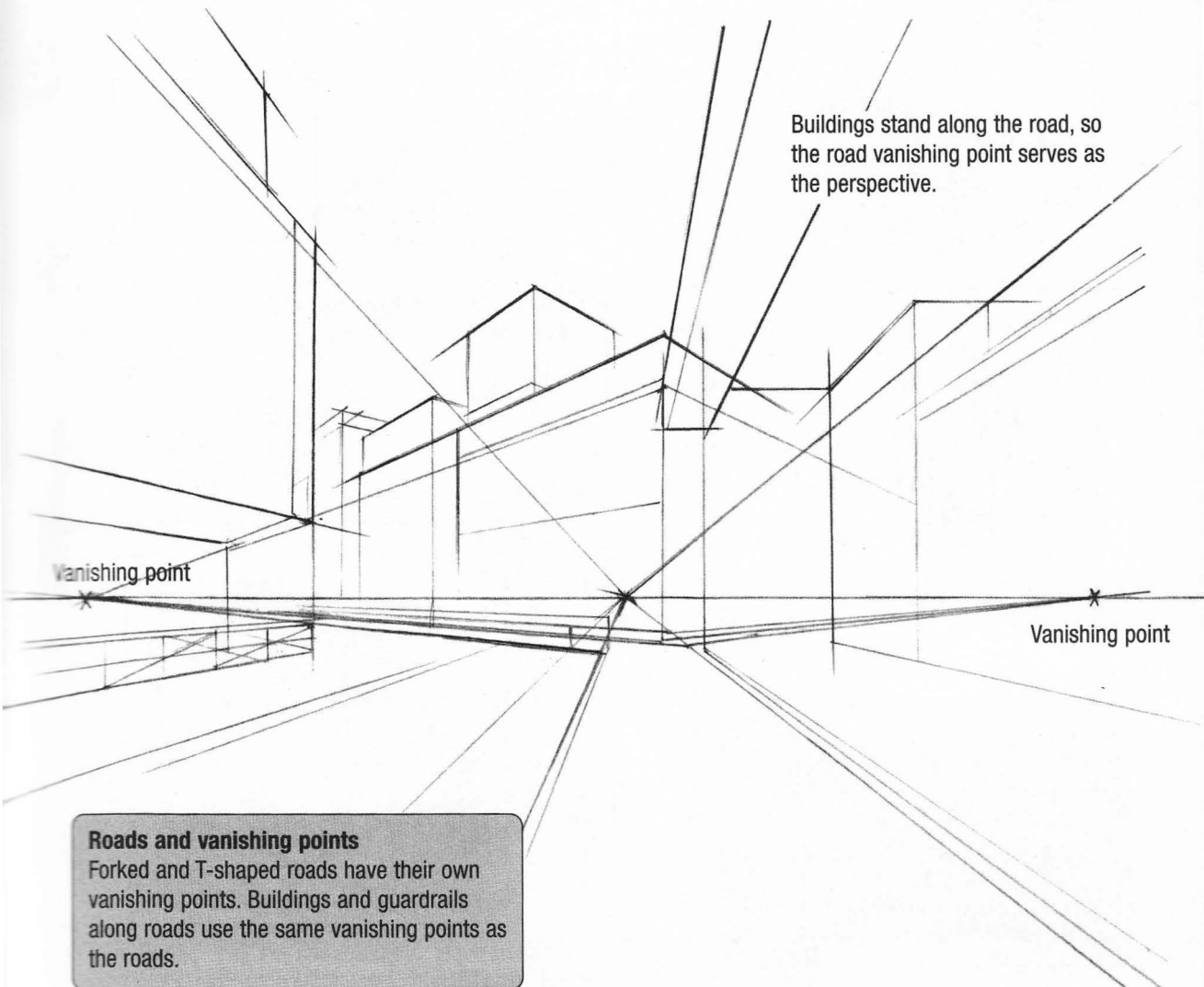
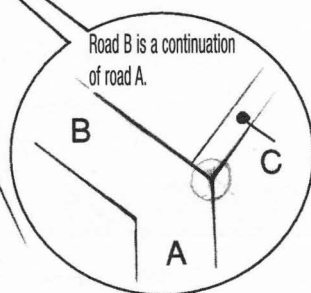
① Choose road vanishing points



② Draw roads from each vanishing point



The closer the road is to the horizon, the narrower it will look, so be careful not to make roads B and C too wide.



Roads and vanishing points

Forked and T-shaped roads have their own vanishing points. Buildings and guardrails along roads use the same vanishing points as the roads.

Drawing Houses — When the Vanishing Point is Far Away

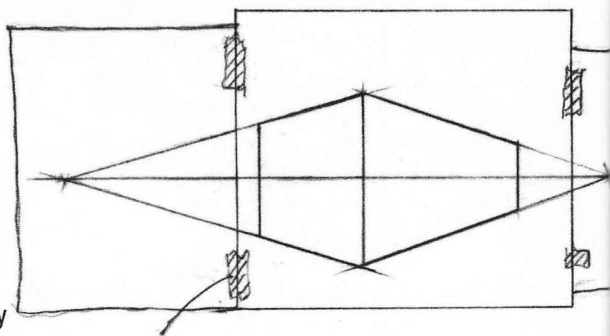
What do you do when the vanishing point of the building you want to draw is located off the paper? There are three things you can do.

1. Add paper
2. Use a copier
3. Draw guidelines

1. Add paper

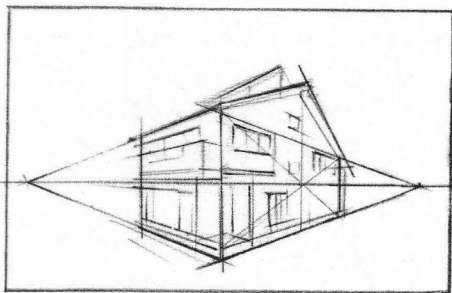


Attach temporarily with masking tape, etc.

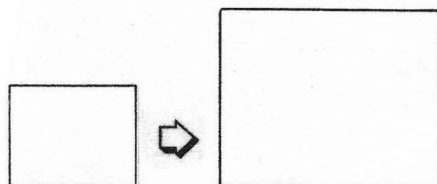


2. Use a copier

- ① Draw a rough sketch in a size that is easy to draw

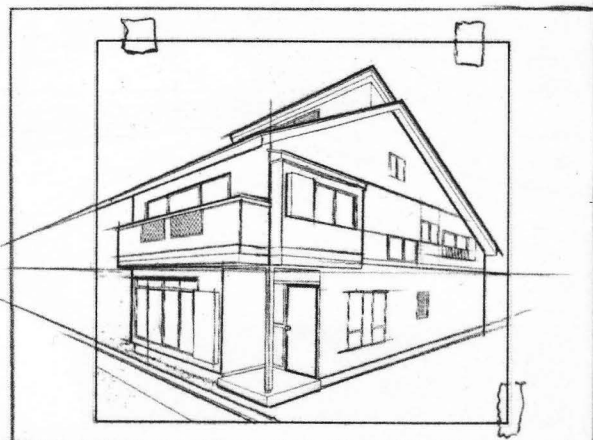


- ② Make an enlarged copy



Use a copier to enlarge the rough sketch to the desired size.

- ③ Trace



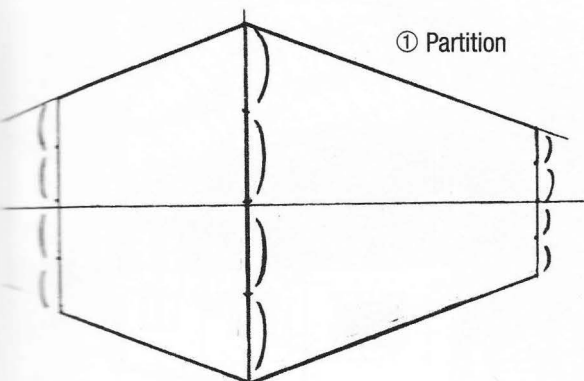
Tracing

Tracing is easier if you use a light box. You will not get a sharp picture if you draw in pen and then enlarge. The pen drawing should be done in the actual size you want. The completed picture can be pasted to the manuscript as is or copied in the same size and pasted.

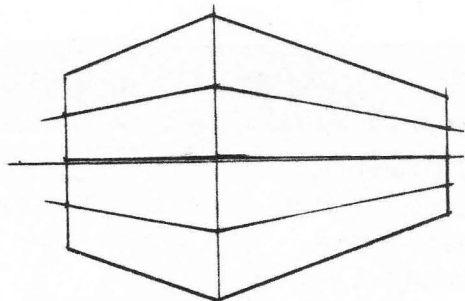
Put tracing paper or transparent PPC (copy) paper over the enlarged rough sketch and draw with pen.

3. Draw guidelines-Partition

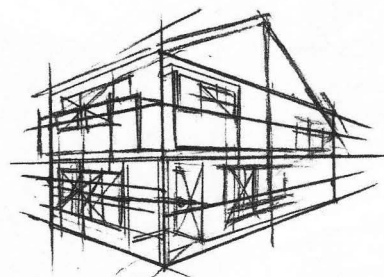
Once you have decided on the outer border of the building, partition the vertical lines.



① Partition



② Link each partition point



③ Start drawing using the lines as a guide

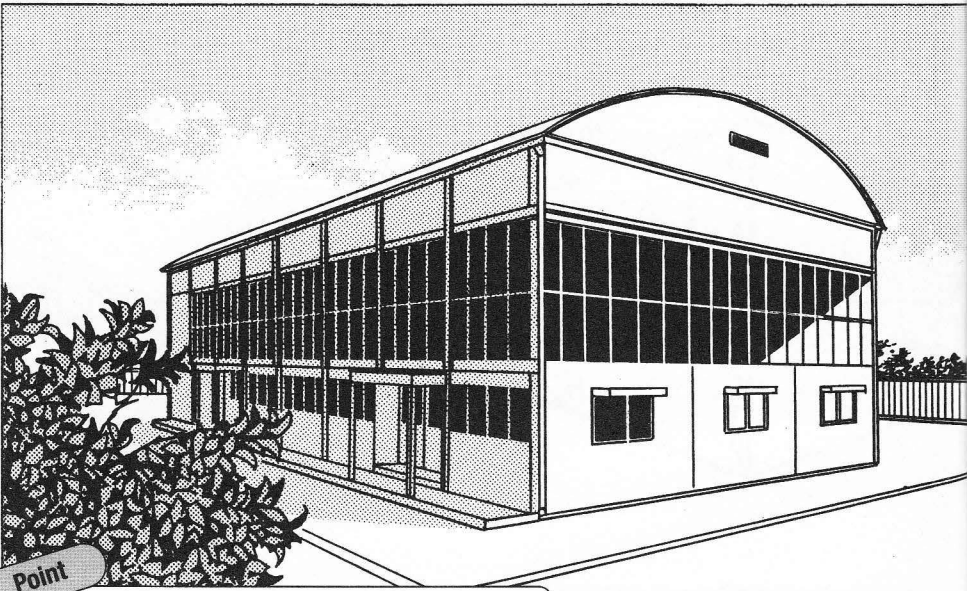


Column: One trick is to draw the partition lines using yellow or blue colored pencils (yellow and blue will not show up when printed). It is usually on one side or the other that the vanishing point becomes so far away that you cannot reach it with a ruler.

Drawing a Gymnasium

When drawing a building, capture the distinctive features of the building.

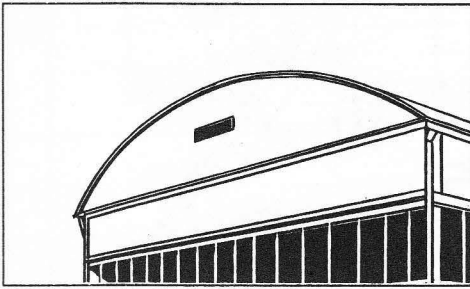
Draw wide buildings like a gymnasium using two-point perspective.



Point

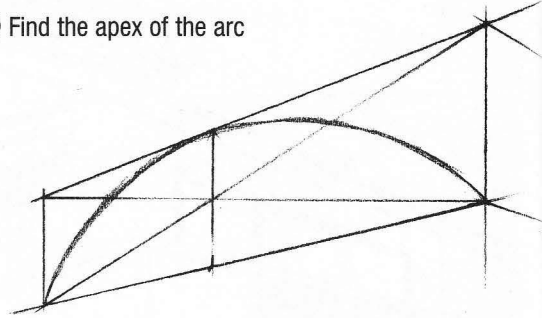
Distinctive features of gymnasiums
Exterior: Many are wide and have a round roof.
Interior: Spacious. Try to present them in a way that makes them look spacious.

How to draw a round roof

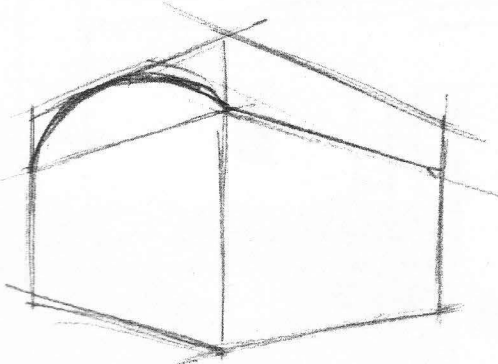


① Give the gymnasium shape

② Find the apex of the arc

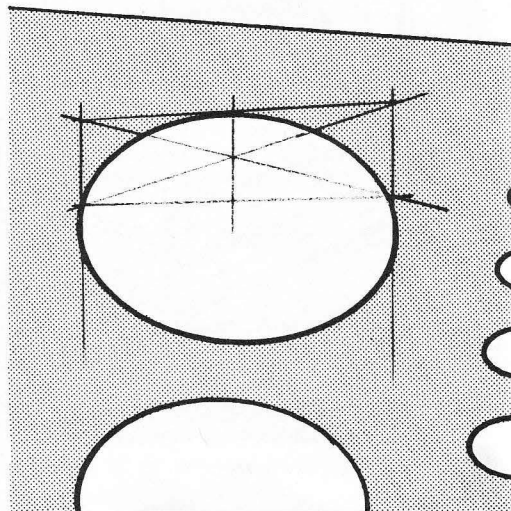


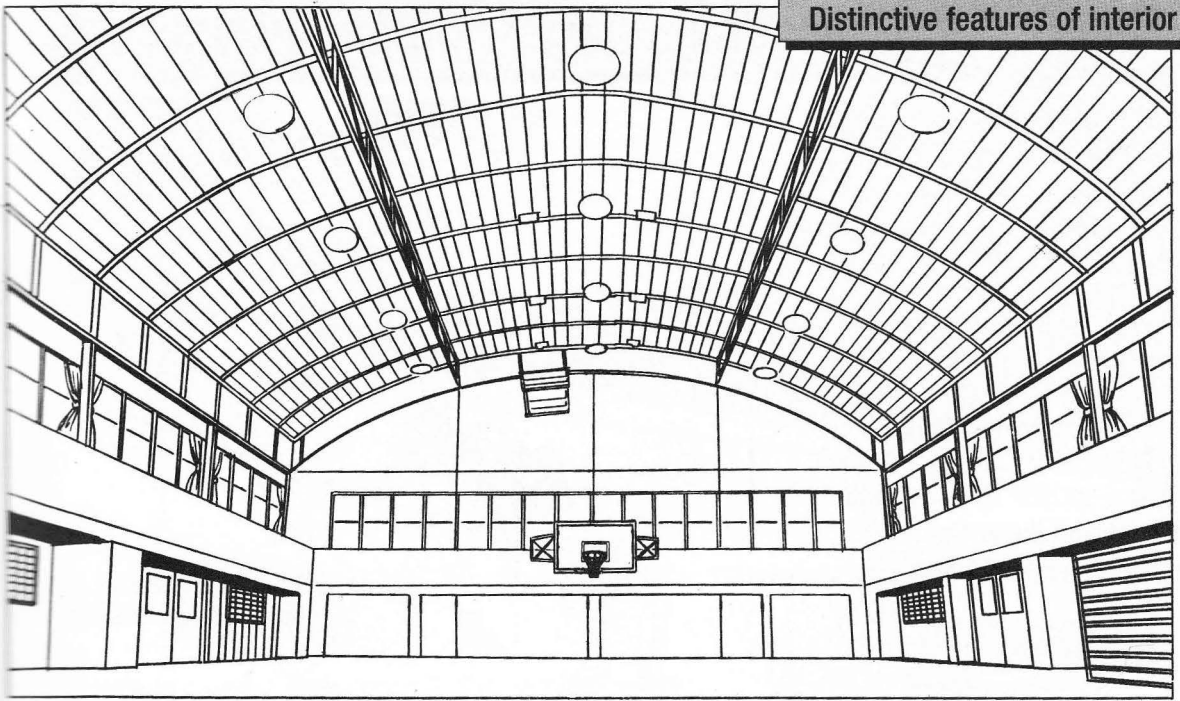
③ Draw the roof using an oval template



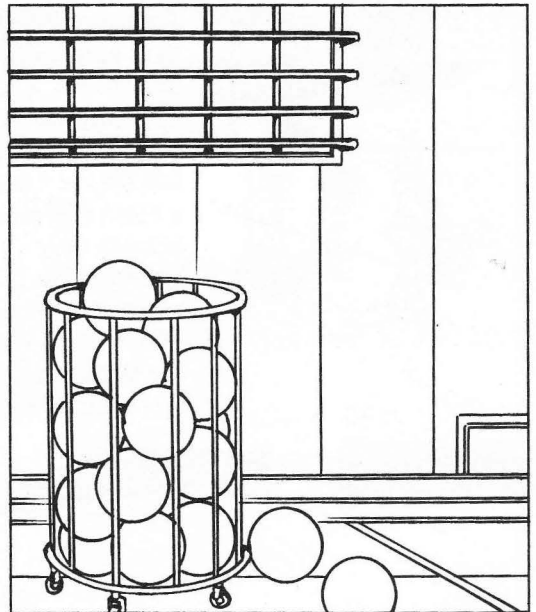
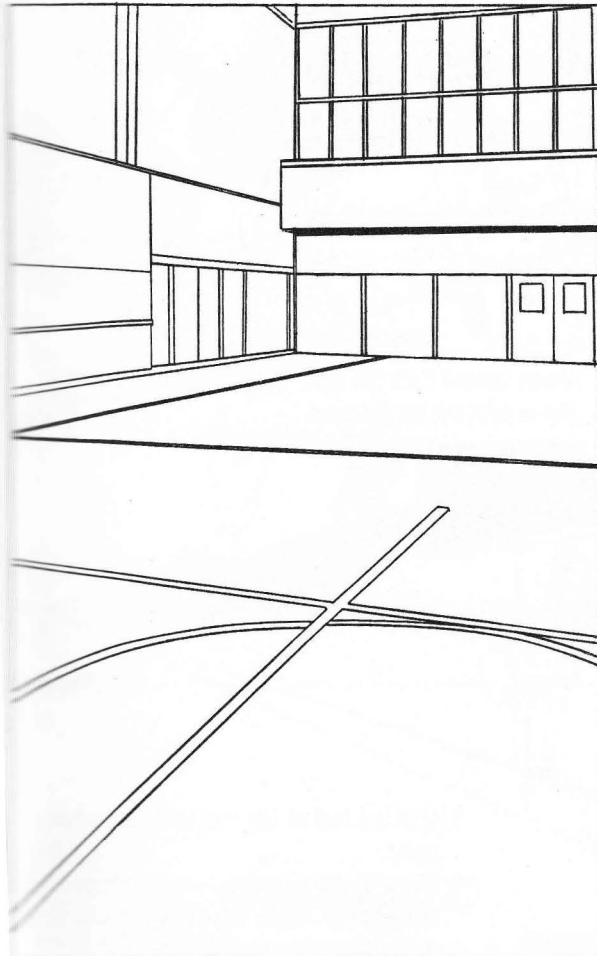
When giving the gymnasium shape, enclose the roof portion in a box.

How to align the oval template:
The type of oval you choose depends on your preferences and the image you have of the roof.





Make the floor and walls big to express the spaciousness and height of the building.



When you draw a scene close to a wall, create the atmosphere of a gymnasium by including windows near the floor, protective bars on windows and other distinctive objects.

Advice

You can present a wide-open space by putting the floor lines higher and drawing windows smaller.

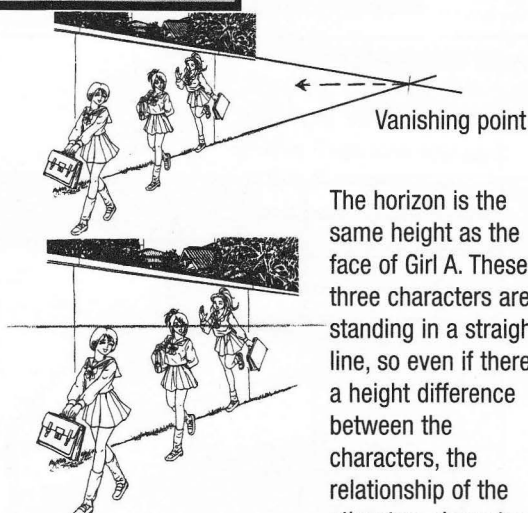
How to Draw Characters and Backgrounds

When drawing backgrounds, the size of characters is very important. Here you will learn how to draw a background from the perspective of characters.

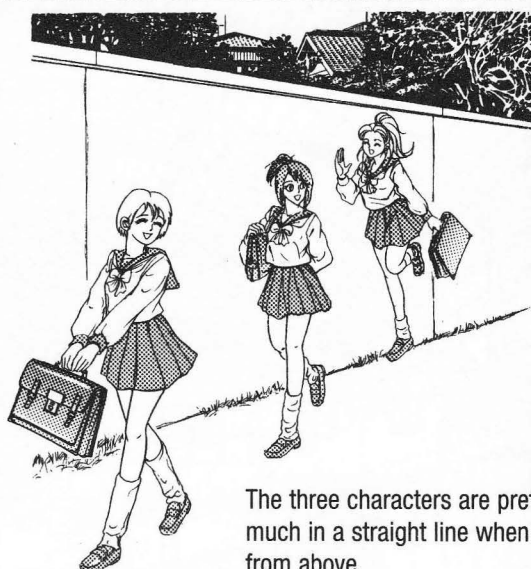
Sense of distance of characters standing in a straight line

Let's try figuring out the vanishing point and horizon from the wall drawn behind these characters standing in a straight line.

Where is the horizon?

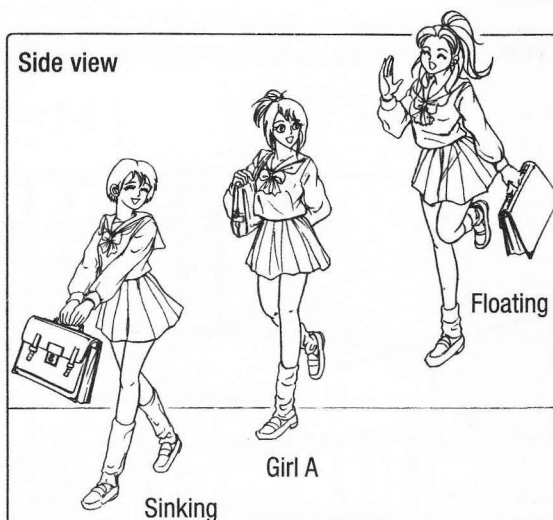


The horizon is the same height as the face of Girl A. These three characters are standing in a straight line, so even if there is a height difference between the characters, the relationship of the other two characters is like that shown in the side view.



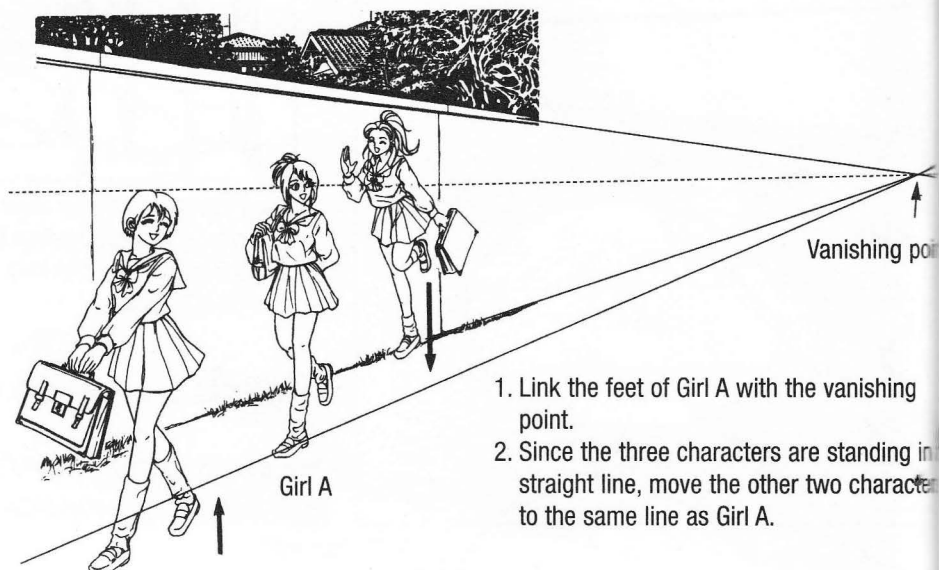
The three characters are pretty much in a straight line when seen from above.

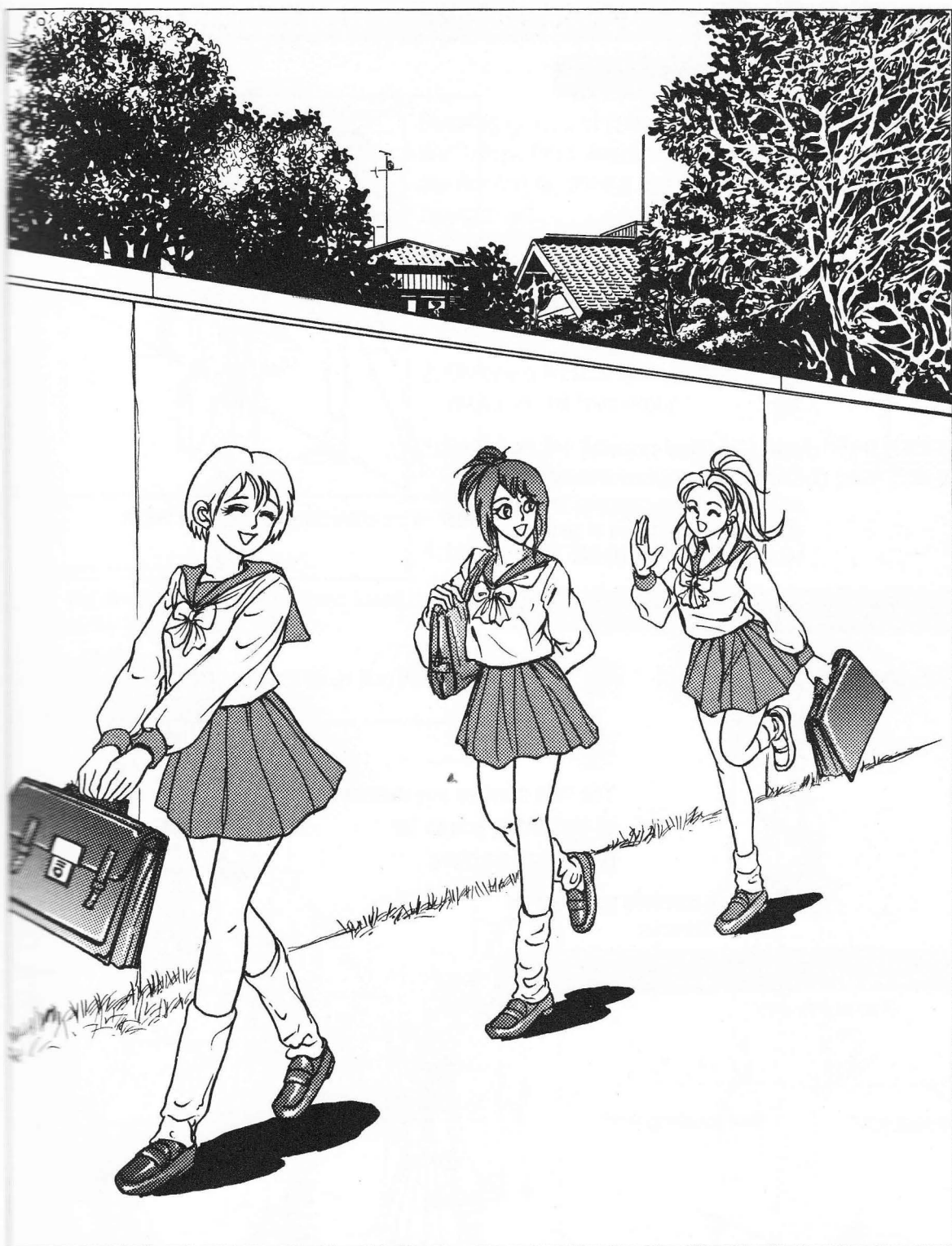
Side view



When viewed from the side, Girl A is the only one that fits in with the background.

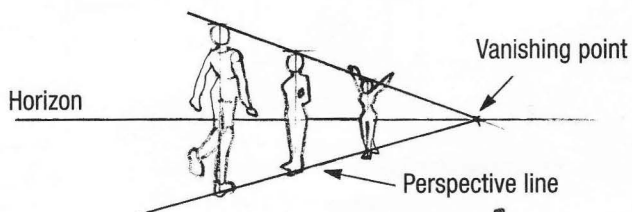
Revision process





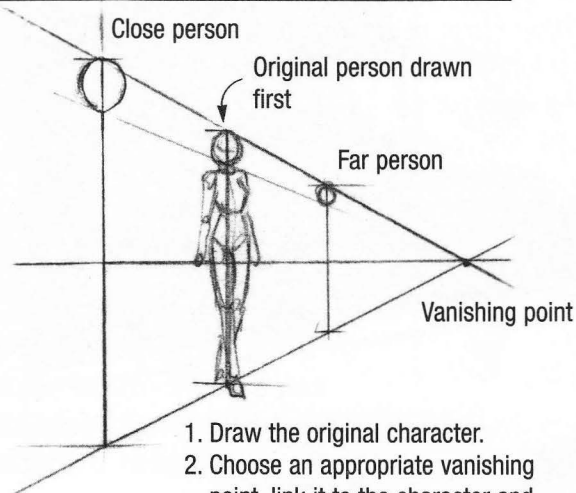
Point

The characters on the same perspective line are in a straight line.

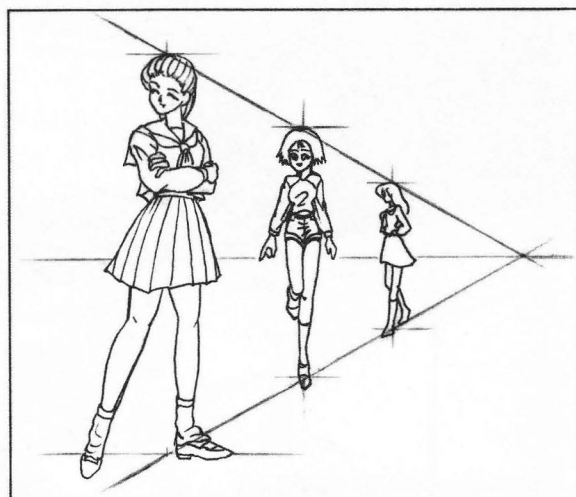


Placing multiple characters — Slide method

Characters walking along a straight line

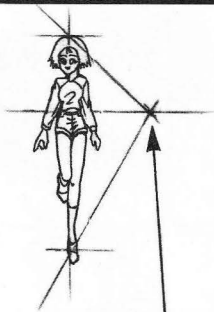


1. Draw the original character.
2. Choose an appropriate vanishing point, link it to the character and draw characters in front of and behind the original character.



Note: All the characters are the same height

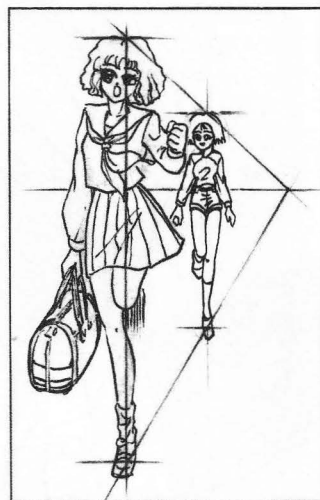
When drawing in front of the original character



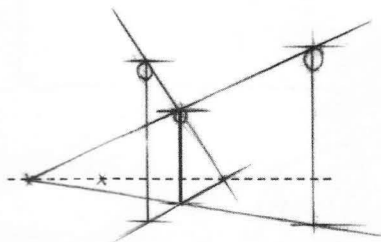
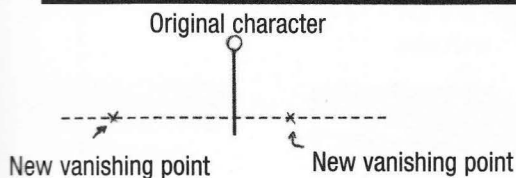
Choose a vanishing point near the original character.

Advice

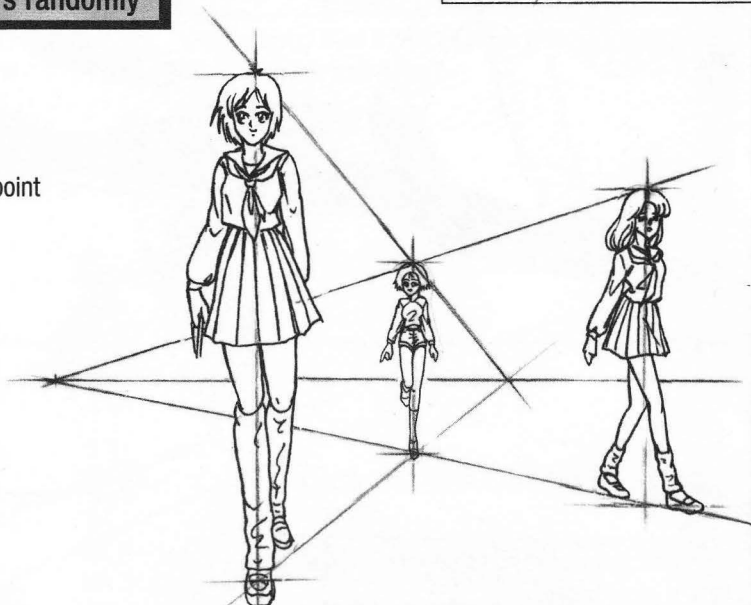
You can choose any number of vanishing points for placing characters.



When you want to place characters randomly



Randomly choose vanishing points



Column: Place multiple characters by sliding one character. You can think of it as placement by reproduction/movement.

How to draw groups of students going to or coming home from school

1 Draw one character



The other characters will be drawn based on the first character.

Drawing groups of characters can be quite difficult. If you don't draw them carefully, characters can look like they are floating or sinking or they will not fit in with the background.

Process:

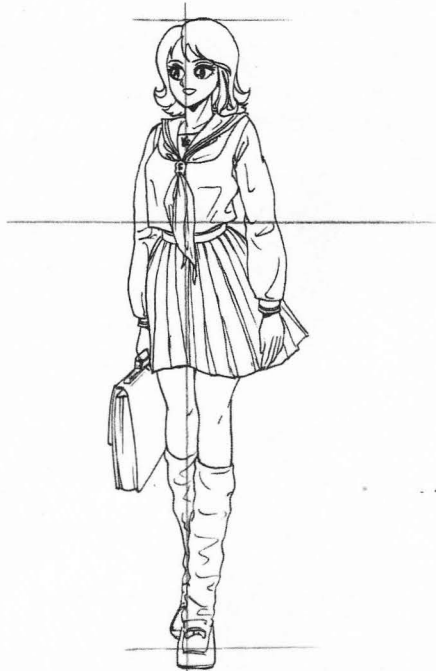
1. Draw a character around which the other characters will be based.
2. Choose a horizon and vanishing point and draw a rough sketch of the background.
3. Based on the first character you drew, begin placing all the other characters from the vanishing point (this is called the slide method).
4. Lastly, draw the background.

2 Draw a rough sketch of the background you want to draw.



Column: It does not matter if the background changes a little later on. When drawing the first character, it is important to choose the horizon and vanishing point, which are the core of the picture.

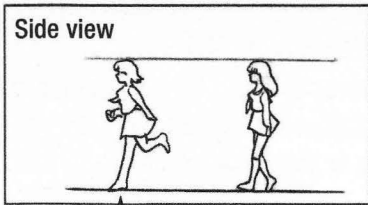
3 -A Mark the top of the head and the feet.



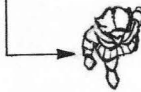
Point

Choose a horizon and vanishing point.
Choose a clear road line.

Side view

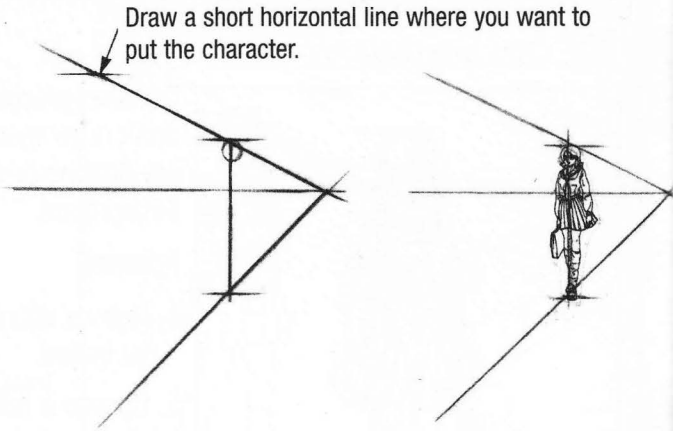


The character you
want to draw

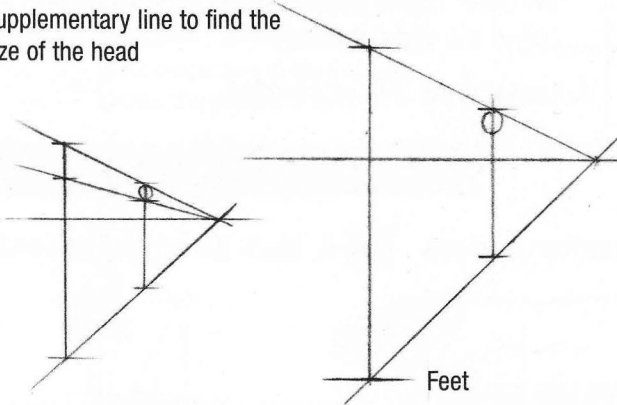


View from above

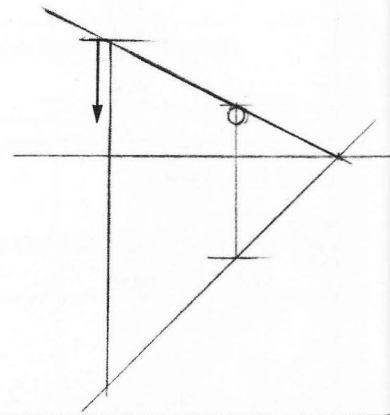
Draw a short horizontal line where you want to
put the character.



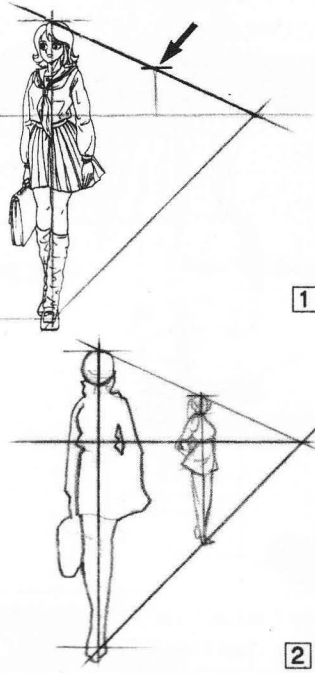
Supplementary line to find the
size of the head



Feet

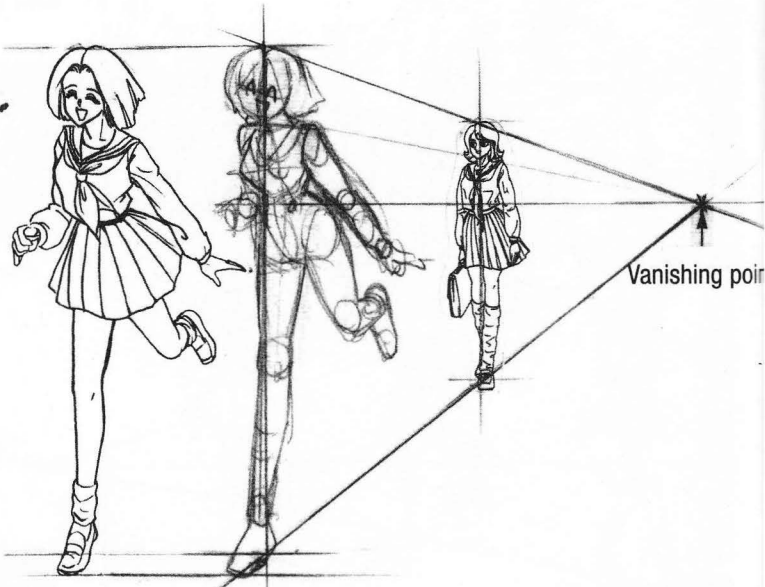


When you want to draw a character
behind the first character



1

2

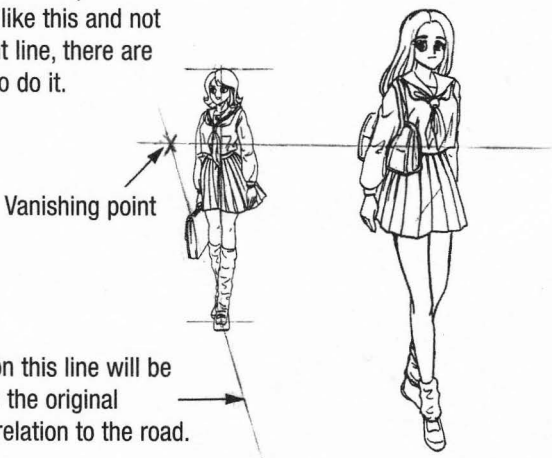


Vanishing point

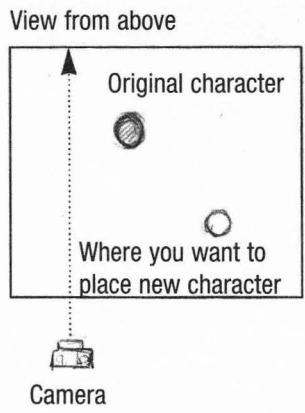
Column: Standing directly in front of or directly behind is the same as standing in a straight line. This is called "characters on the same line."

3 -C Randomly place characters

When you want to place characters like this and not in a straight line, there are two ways to do it.

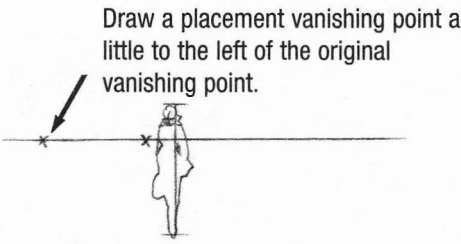


A character on this line will be "in line" with the original character in relation to the road.

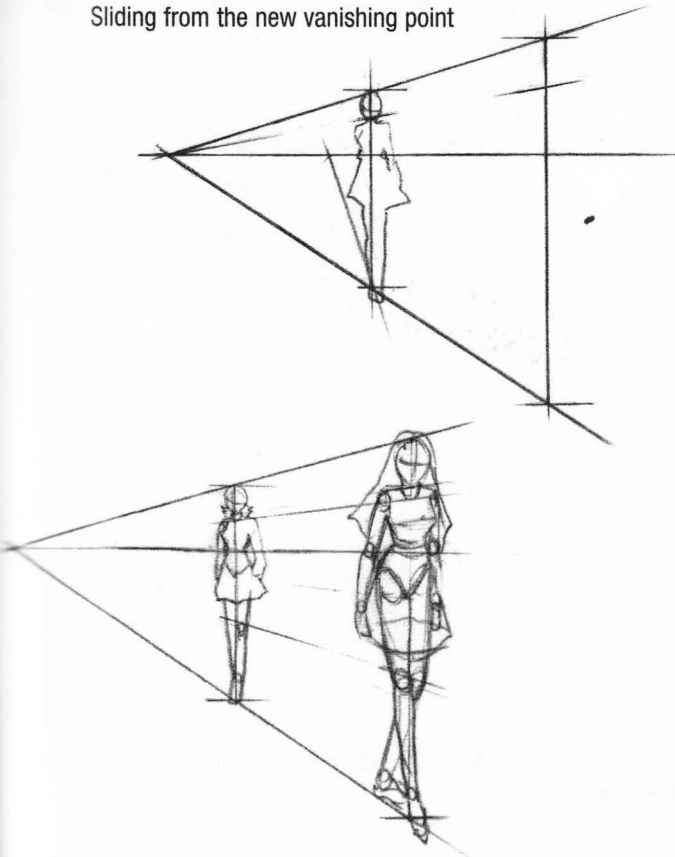


How to randomly place characters
 1. Draw by just sliding backward and forward
 2. Combination of sliding to the side and backward and forward.

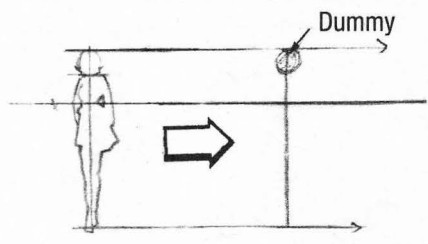
① Sliding backward and forward-Draw placement vanishing point



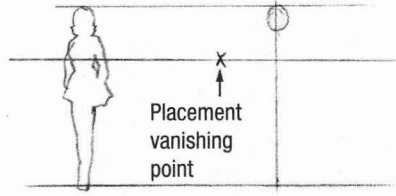
Sliding from the new vanishing point



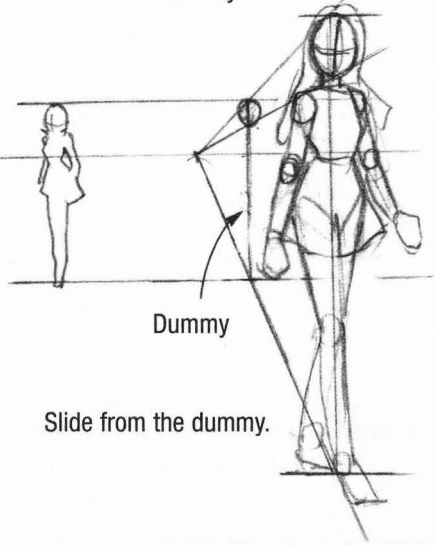
② Parallel translation and sliding backward and forward-On the basis of dummy



Slide the original character into a parallel position (height is the same).



Put a placement vanishing point near the dummy.



Slide from the dummy.



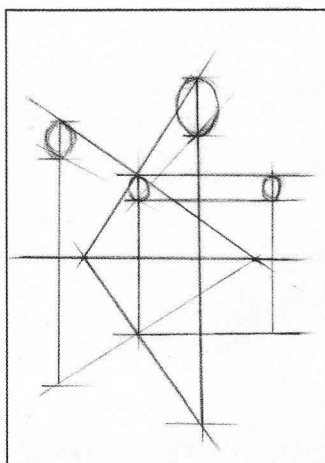
Column: For scenes of students going to school, place blocks of two or three students walking side by side and place a single student behind, in front of or beside them.



Column: When there are many characters in the foreground, pen in the characters before sketching the background and painting.

How to create height differences — Raising and lowering the head

All the characters will be the same height if you just slide backward and forward and use parallel sliding. When you want to express height differences, do so by raising and lowering the head, leaving the feet as they are.



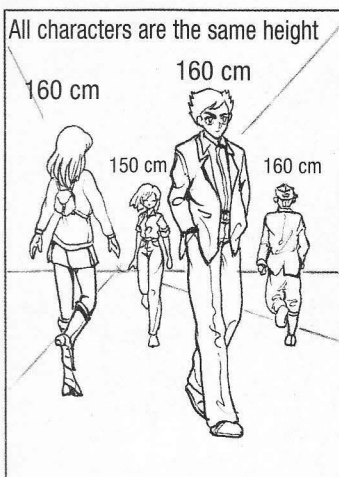
-30 cm
(-11.81 in.)

+20 cm
(+7.87 in.)

+15 cm
(+5.91 in.)

One head shorter
Height about 130 cm

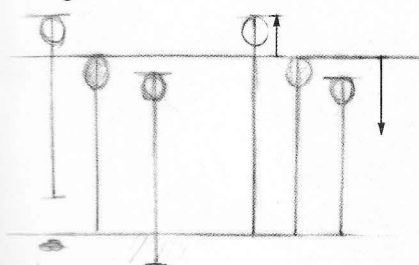
2/3 head longer
Height about 180 cm



180 cm = 5.90 ft.
160 cm = 5.25 ft.
150 cm = 4.92 ft.
130 cm = 4.27 ft.

Not good

Good



Raising and lowering the feet make a character float or sink.

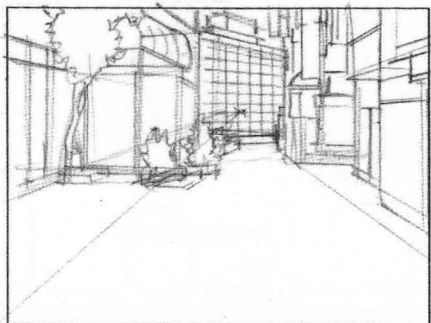


Column: Give each person in a crowd a different direction and different clothes to make a picture come alive.

An easier way to draw crowds

Draw various sized heads on the horizon line. Then draw the bodies using the heads as a measure of each person's height.

Cut with rough image of background

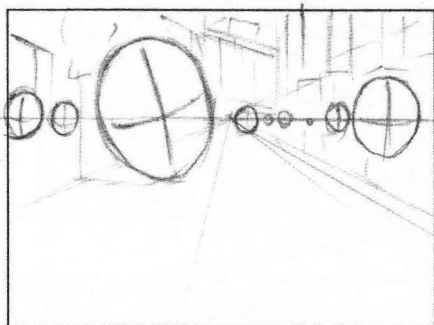


Relationship between human head and body

This is generally called the "head-to-body ratio."

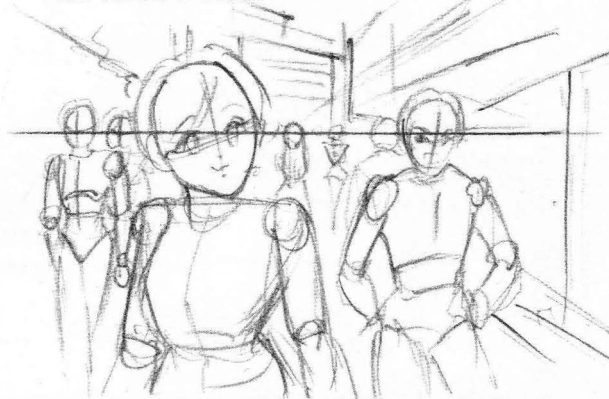
Example: The height of a person with a head-to-body ratio of 1:6 is six times the length of the head.

Draw various sized heads



Horizon

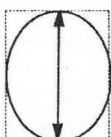
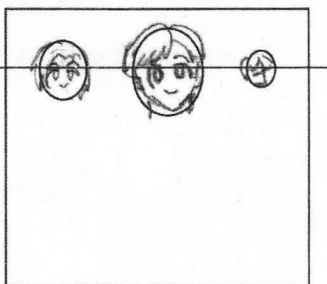
Draw outline of bodies



Column: This technique is perfect for scenes with a close-up of a face in the foreground and many people in the background.

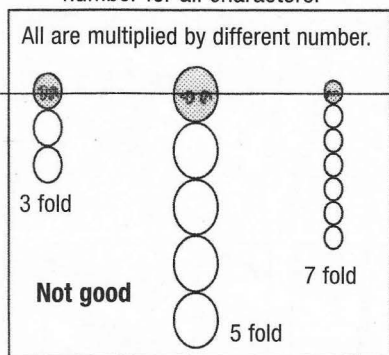
Drawing the entire body beginning with the head

Measure the length of the head and multiply to get the total length of the character. Multiply by five if the head-to-body ratio is 1:5 and multiply by six if the head-to-body ratio is 1:6.

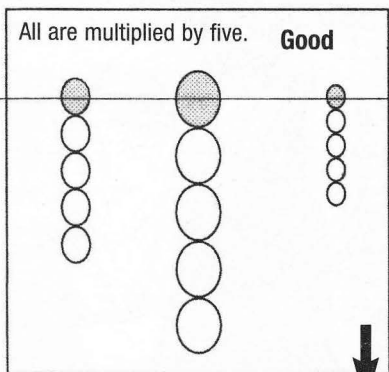


Length of head

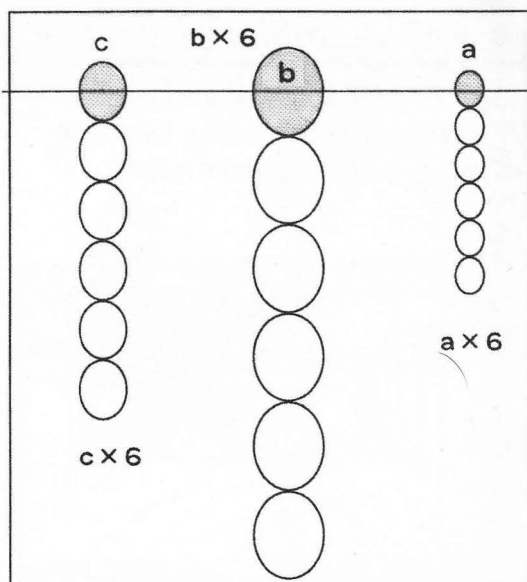
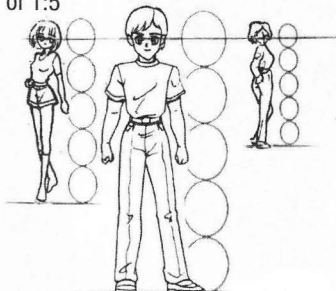
Note: Always multiply the head length by the same number for all characters.



After the total length has been determined, balance the characters to taste.

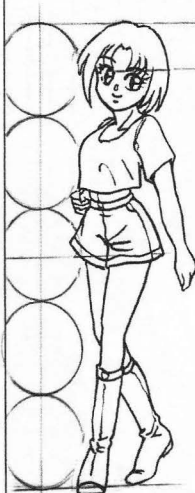


Characters drawn with a head-to-body ratio of 1:5

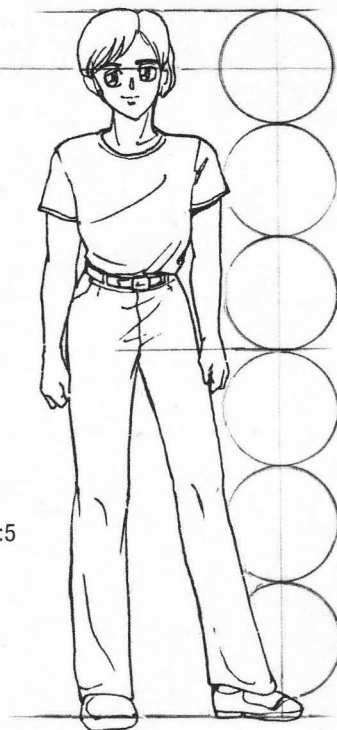


Reference: In the case of a head-to-body ratio of 1:6

In this drawing, heights were determined using the same head-to-body ratio before individual differences in head-to-body ratio were added.



Head-to-body ratio of 1:5



Head-to-body ratio of 1:6



Backgrounds for bust shots of characters

When drawing backgrounds for bust shots of characters, draw the entire body of the character even if it won't all appear in the picture. The height of the building door and guardrail should be drawn in proportion to the height of the character.

Point

Draw the two sides of the sidewalk using the vanishing point.

Vanishing point



Edge of sidewalk (road side)

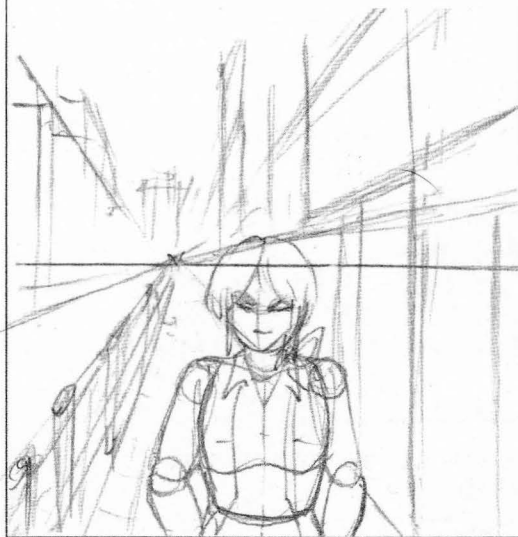
Perspective line representing the edge of the building

Perspective line indicating height of door (2 m)

Advice

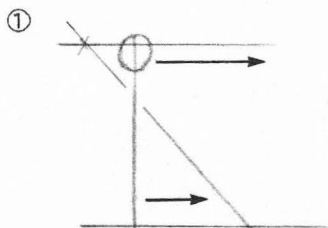
Synchronize the scale of the character background and the character using a dummy.

Theme Sidewalk, building and entrance on the right, guardrail on the left

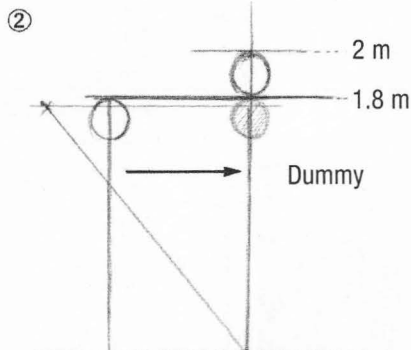


Rough image

Drawing building on right
Determining height of building door



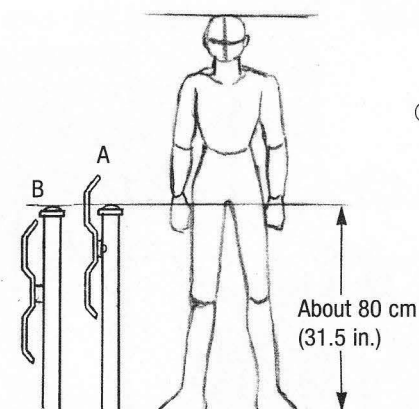
Slide character horizontally (draw dummy)



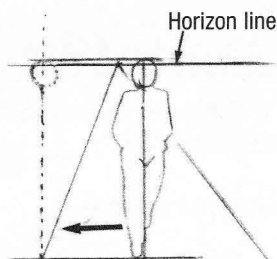
Building door = 2 m (6.56 ft.)
Character (adult male) = 1.8 m (5.90 ft.)
The height of the door is about one head higher than the character.

Column: Synchronize the scale of the character and the background. When drawing the background, clearly show how high background parts are above the ground. When you try to do it by eye, you end up with doors that are too big or houses that are too small in relation to the character.

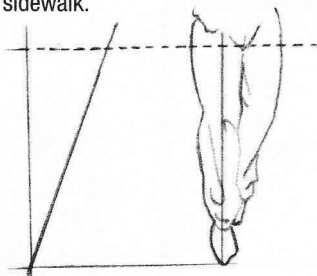
Drawing guardrail 1 Determining height of guardrail



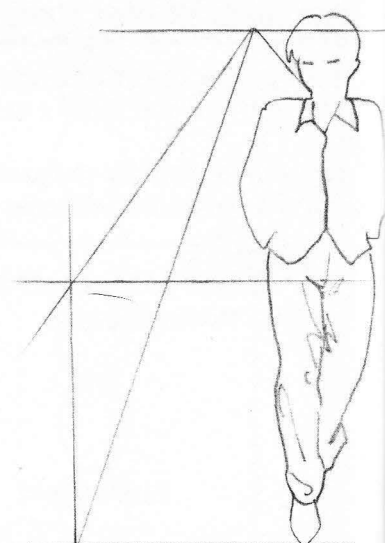
The height of the guardrail is a little above the thighs



- ① Slide the character to the edge of the sidewalk.



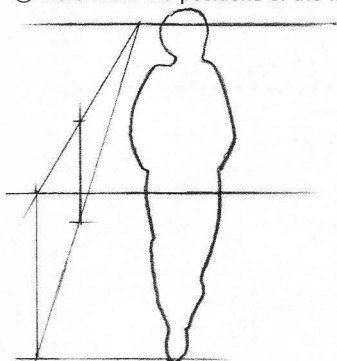
- ② Draw a supplementary line horizontally at a little above thigh height.



- ③ You get the right guardrail height in relation to the size of the character.

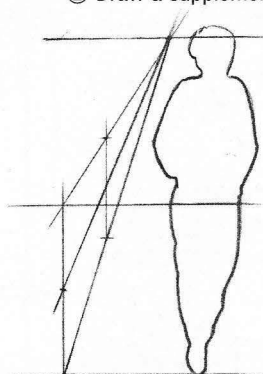
Drawing guardrail 2 Guardrail poles at even intervals

- ① Determine the positions of the first two poles



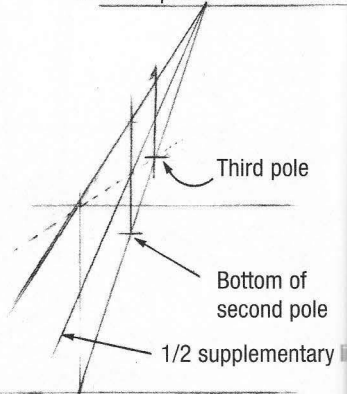
The interval between guardrail poles is uniform. You are free to choose any interval.

- ② Draw a supplementary line.

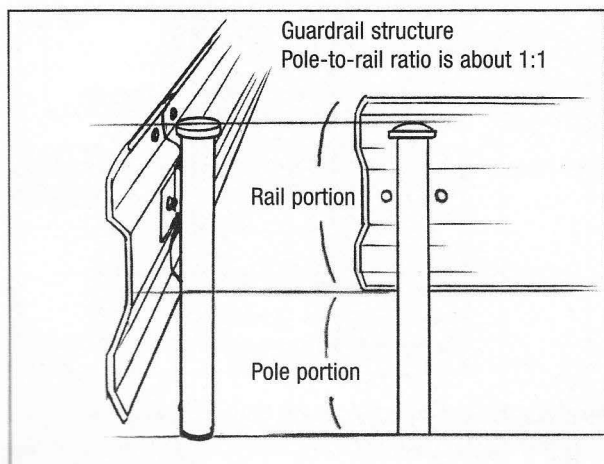
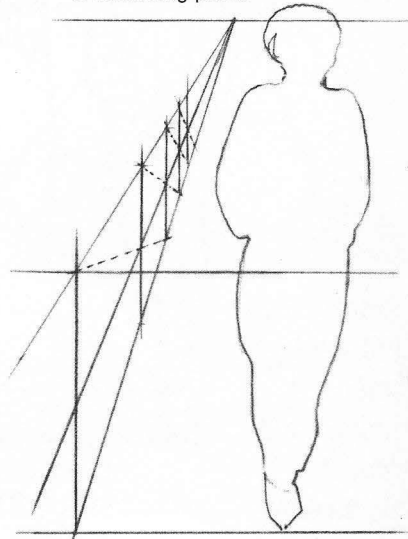


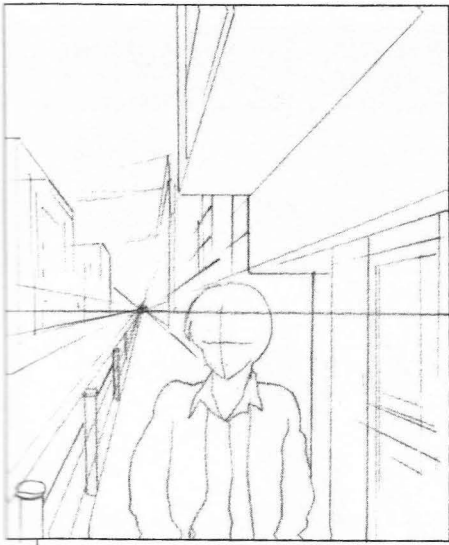
Divide at $\frac{1}{2}$ the height
Supplementary line in
direction of vanishing point.

- ③ Determine the position of the third pole.



- ④ Determine positions of remaining poles.



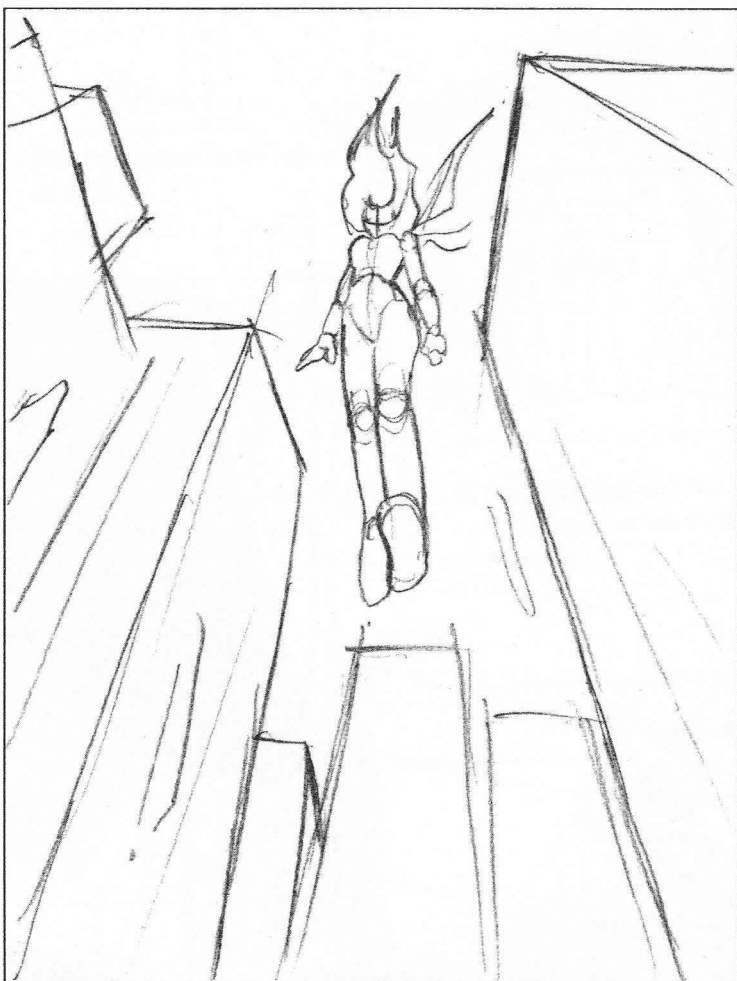


Creating Effects by Changing the Composition of a Picture

Do not use perspective drawing indiscriminately when drawing long shots of buildings and upward and downward views, etc. Simple ideas can create large effects.

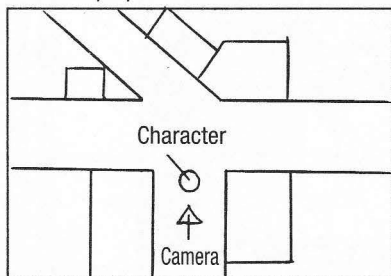
Drawing upward views Vertical two-point perspective

When drawing an upward view, assume the location from the placement of buildings in a rough sketch. The technique you will use is vertical two-point perspective.

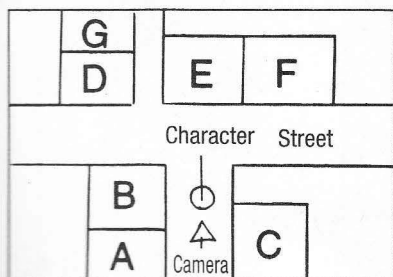


Rough sketch

Location proposal 1

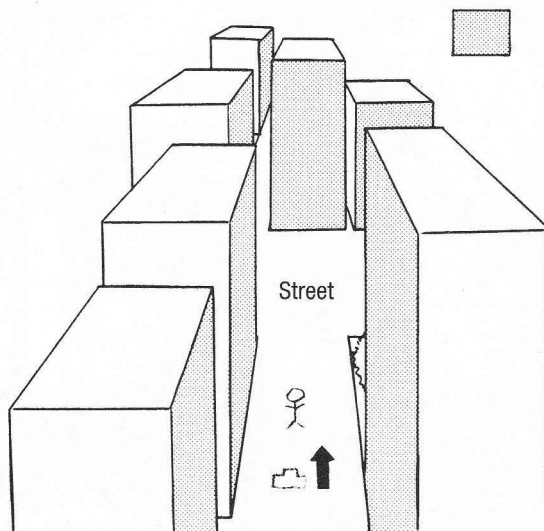


Location proposal 2



Cut based on proposal 2

Visible building surfaces



Vertical two-point perspective

Upper vanishing point: Emphasizes distance in the upward direction.

Lower vanishing point: Emphasizes depth of buildings, etc.

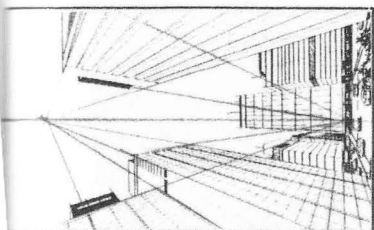
Note: As was the case with drawing slopes, draw the two vanishing points on the same vertical line.

Vanishing point for emphasizing distance in the upward direction

Generally, in one-point perspective and two-point perspective drawings the vanishing point is always placed on the horizon and objects are composed of lines perpendicular to the horizon. In vertical two-point perspective, the vanishing points are placed near the top and bottom of the picture.

Advice

Use vertical two-point perspective for powerful upward views.



Becomes normal two-point perspective when picture is placed on its side

Column: Why place vanishing points on the same vertical line in vertical two-point perspective drawing? Because you are stopping and looking up and down at the same time.

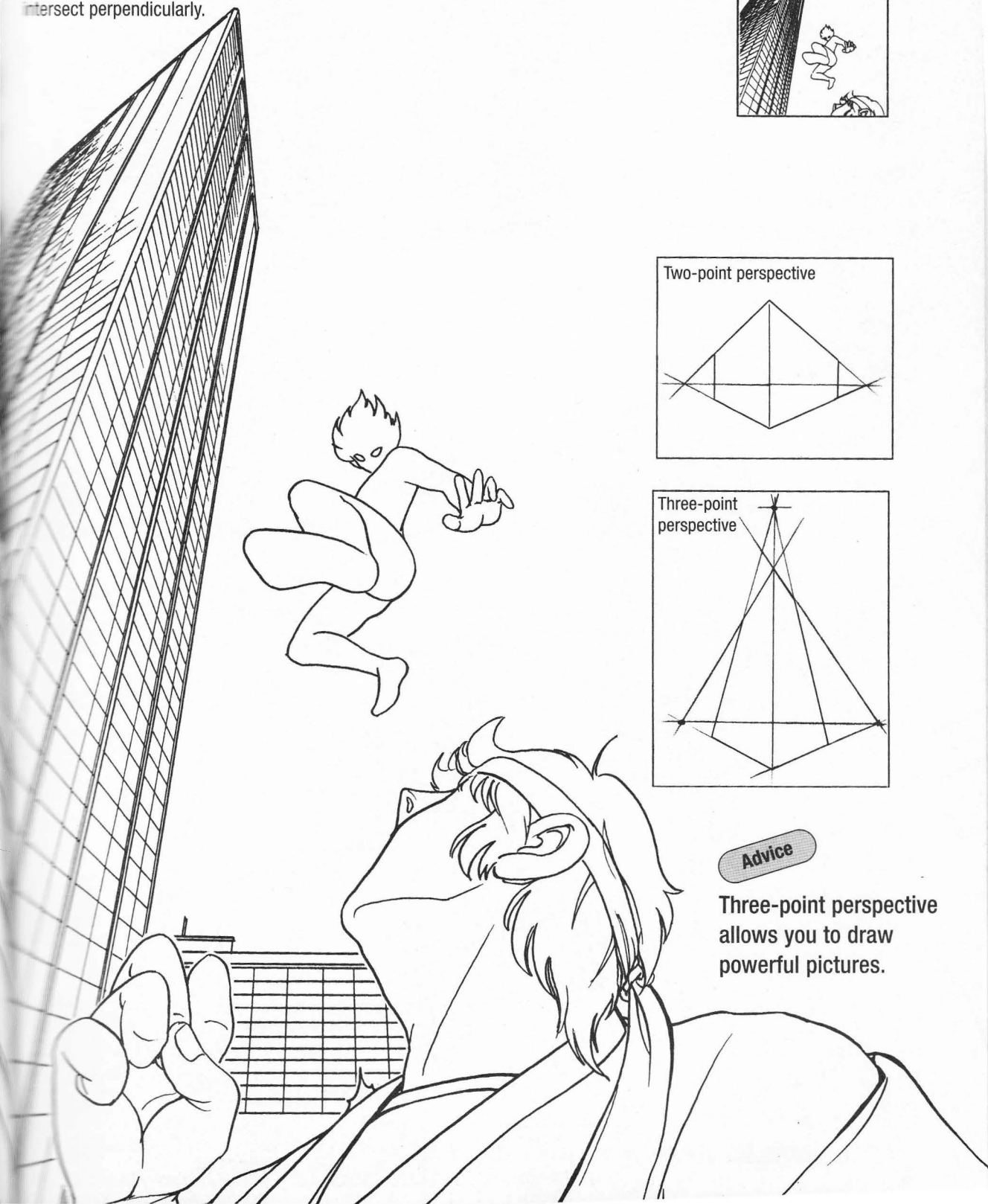
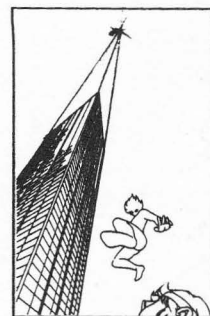
Vanishing point for emphasizing depth



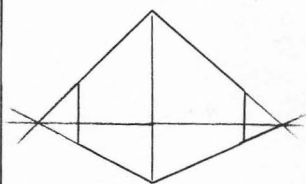
Three-point perspective drawing

Two-point perspective is a technique for creating a cubic effect by giving a sense of distance to the left and right of a picture.

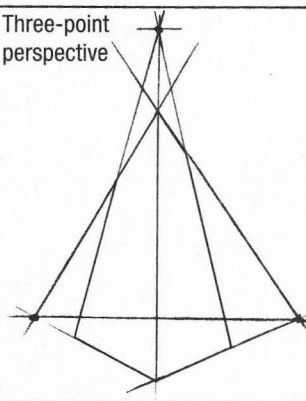
In three-point perspective, a third vanishing point is added to give a sense of distance to height. Unlike one-point and two-point perspectives, the usual vertical and parallel lines are not present. In addition, the horizon line and vertical lines intersect perpendicularly.



Two-point perspective



Three-point perspective



Advice

Three-point perspective allows you to draw powerful pictures.

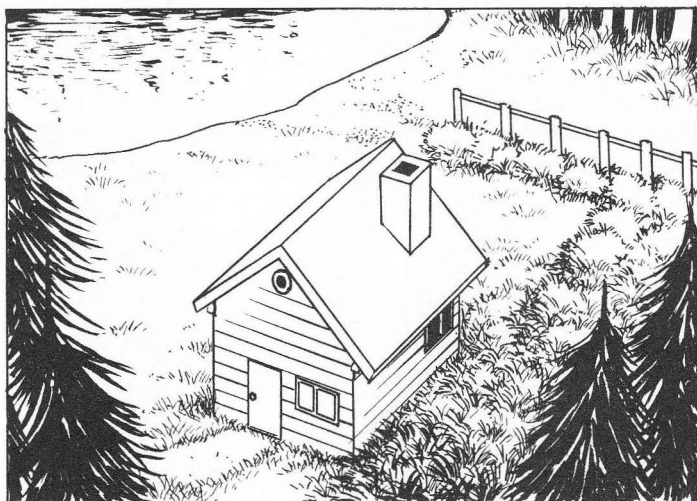
Aerial view of scenery

Bird's-eye view

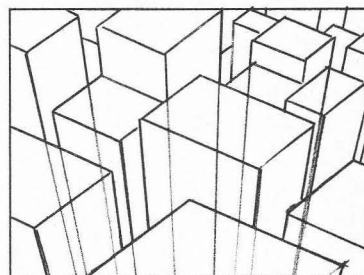
When drawing a bird's-eye view and the horizon is not visible, there is no perspective (vanishing point). Draw buildings parallel lengthwise and crosswise.

Advice

Do not think too much about perspective in bird's-eye view pictures.



Skyscrapers



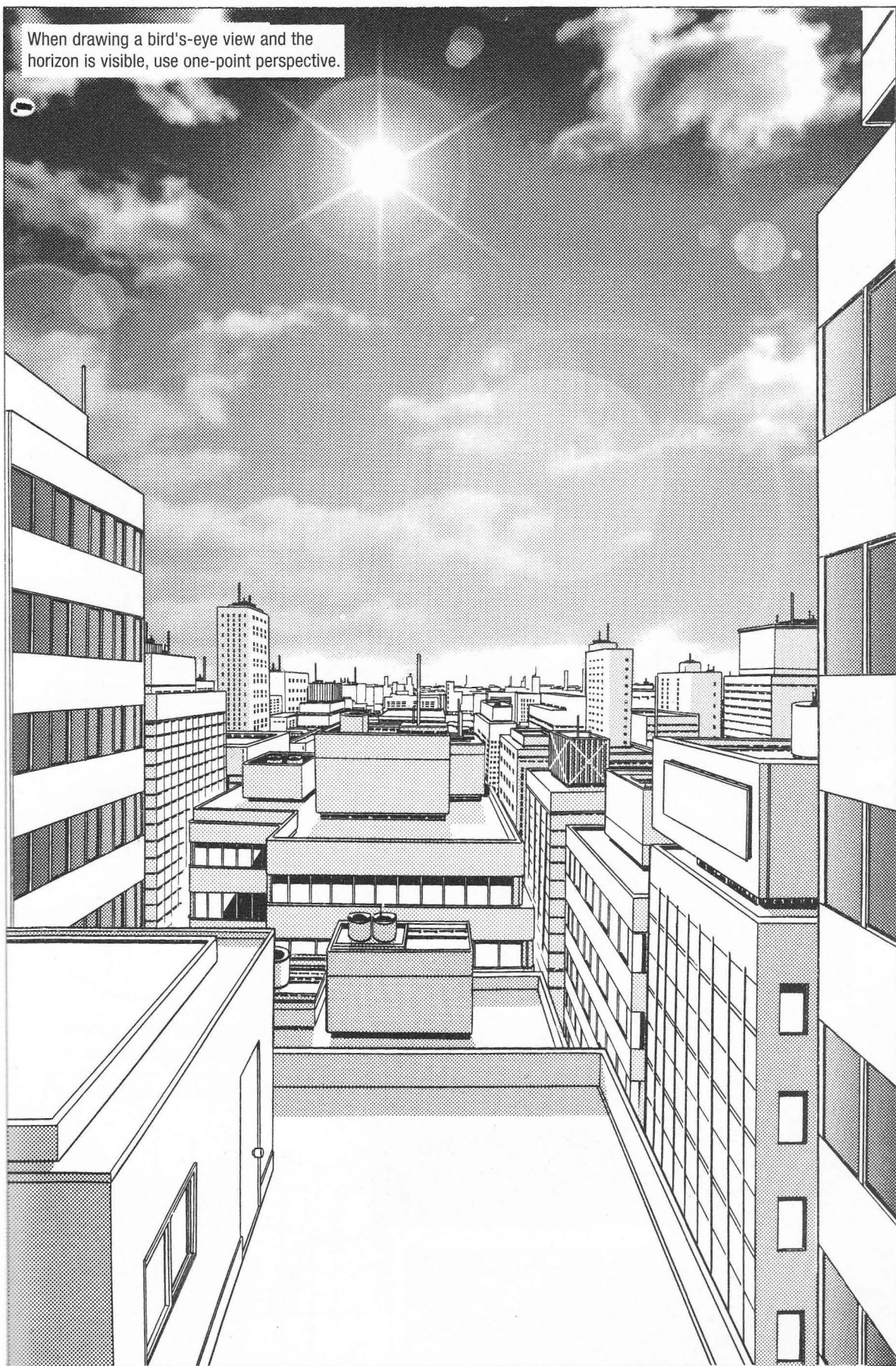
Place
vanishing
point below.

For placement of buildings,
try drawing a map.

Roofs of buildings seen from bird's-eye view

- Draw building roofs squares parallel lengthwise and crosswise.
- Do not think of perspective in the normal sense of the word.
- To emphasize height, draw using one-point perspective from below.

When drawing a bird's-eye view and the horizon is visible, use one-point perspective.



Column: When drawing a bird's-eye view of scenery using one-point perspective, freely place the vanishing point in accordance with the objective of the picture or the composition.

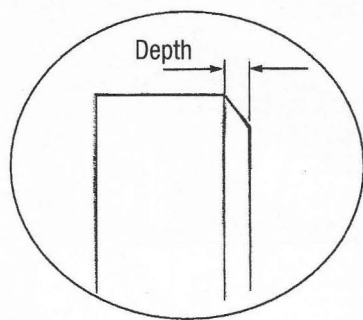
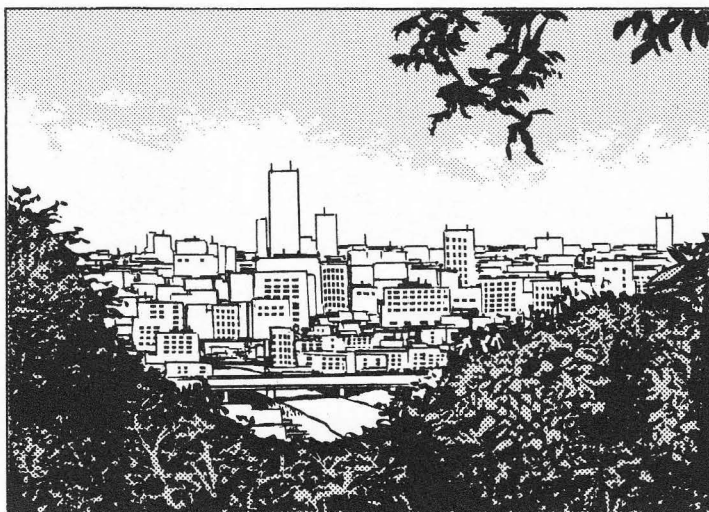
Making a group of buildings in the distance look cool

When drawing a group of buildings in the distance, reduce the depth of the buildings.



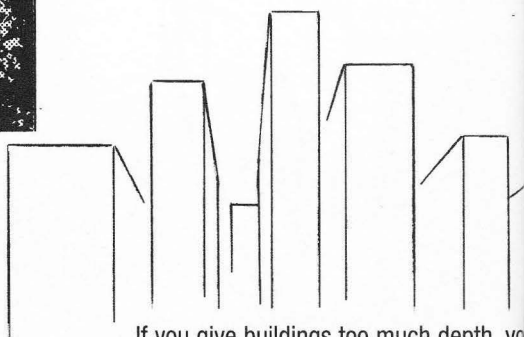
Reducing the depth of buildings is effective when the main subject is in the foreground and the buildings are used for pure scenery in the background.

Reference: Town in the distance



Distant view

This composition is often used for depicting a town on the edge of a wasteland in fantasy, science fiction and other manga. This technique is used to make it look like something was filmed from far away. Note that fundamentally the farther away an object is the less thick it will be.



If you give buildings too much depth, you will lose the sense of distance.

Application: Reducing depth of buildings

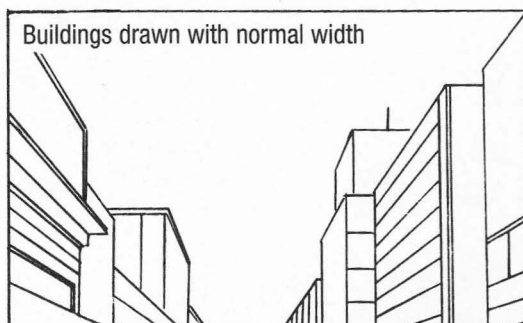
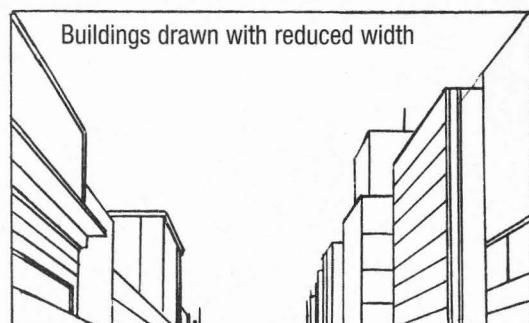
When drawing a line of buildings using one-point perspective, making the width (depth) of buildings narrower eliminates the cramped feeling.

Point

Draw objects far away with thin lines. For lines that run into characters, draw them thin as if they faded away and do not make contact with the character.



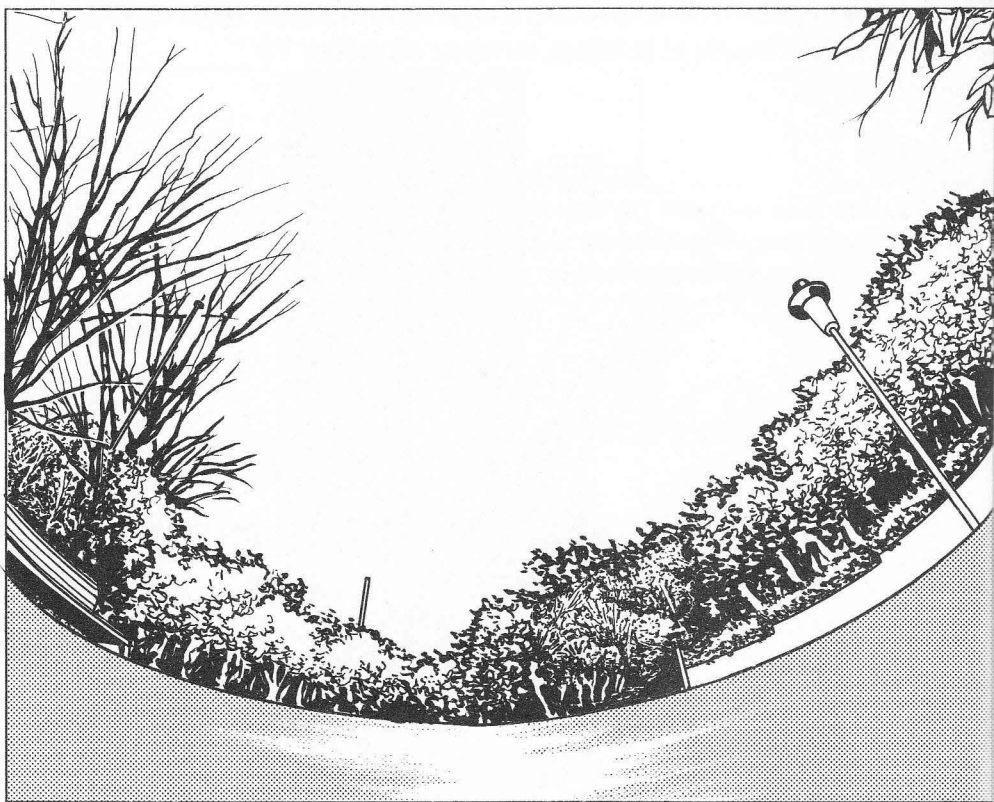
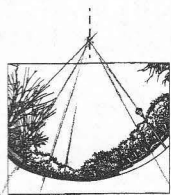
There is a big difference even then the frames are the same size and the vanishing points are in the same position.



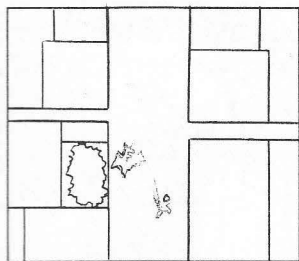
Column: When you want to avoid drawing a confusing group of buildings in a long, narrow frame, draw buildings as if they were in the distance using narrow depth lines.

Perspective when the ground is curved

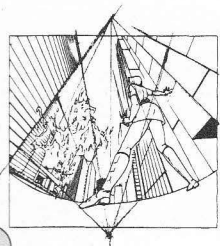
Distorted ground used for dramatic presentation can be used in a picture where you are looking up from a low place. Place the vanishing point in the middle directly above the picture.



Group of buildings - When drawing using vertical two-point perspective

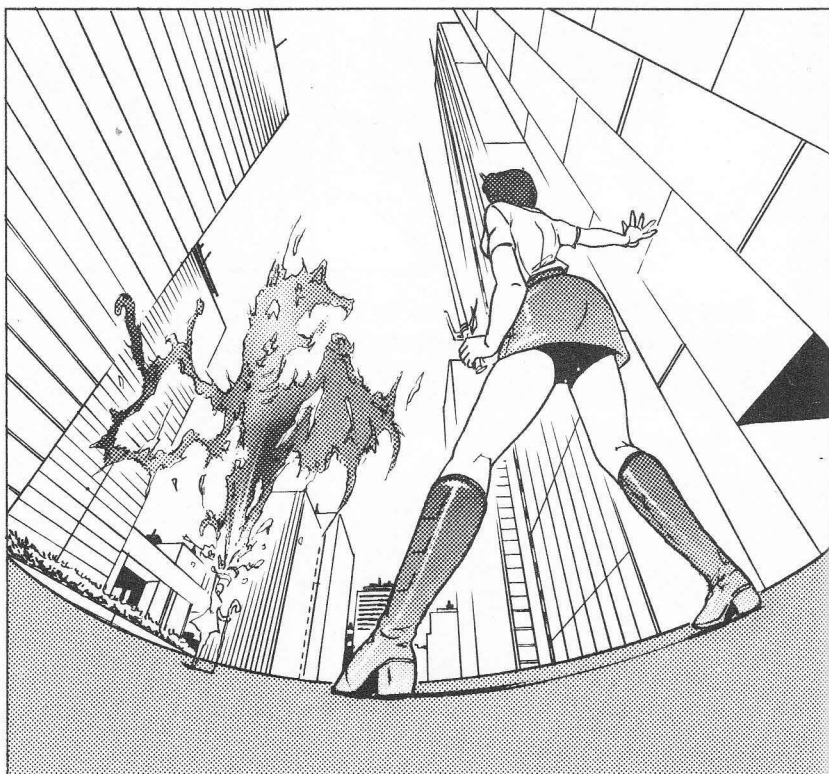


View from above



Point

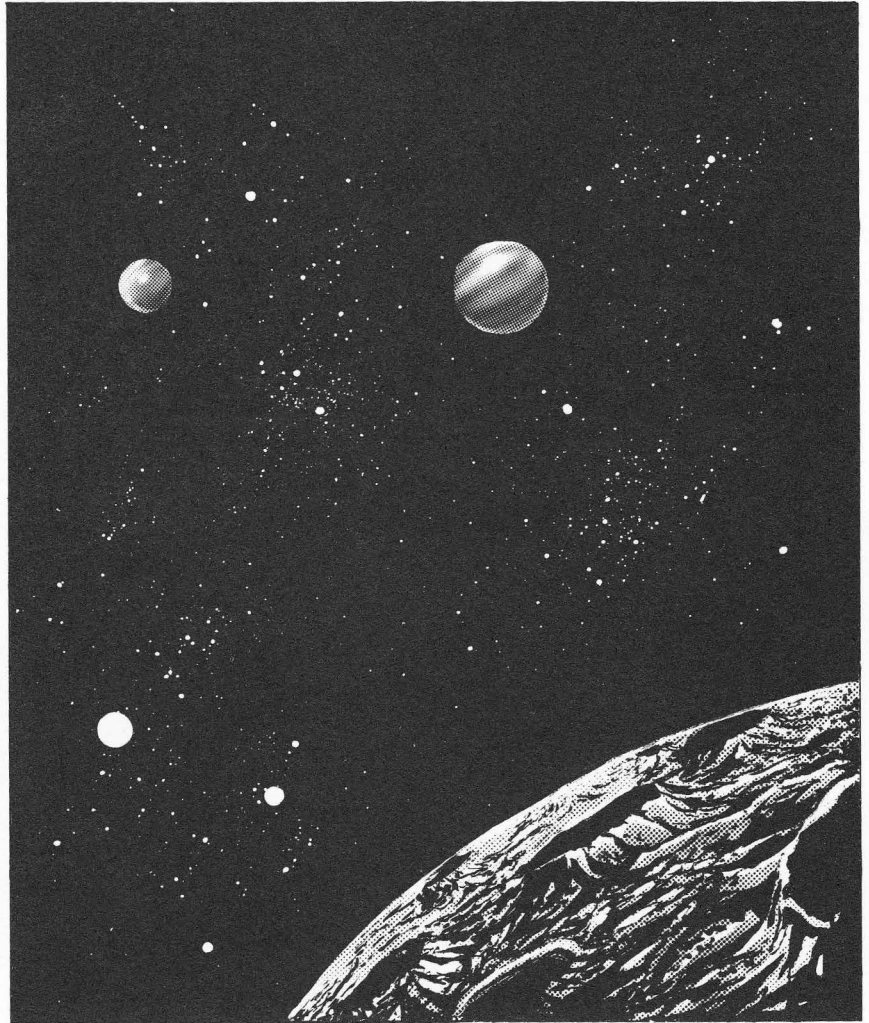
The amount of distortion of the curved surface depends on individual sensitivity. Draw freely. In the case of a group of buildings, use vertical two-point perspective.



Let's Draw Outer Space

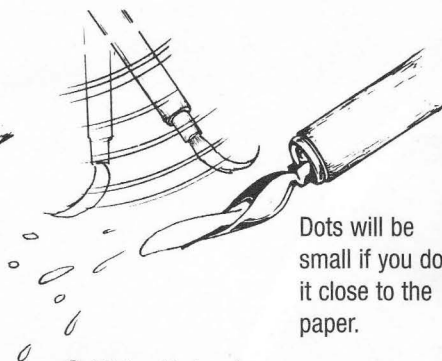
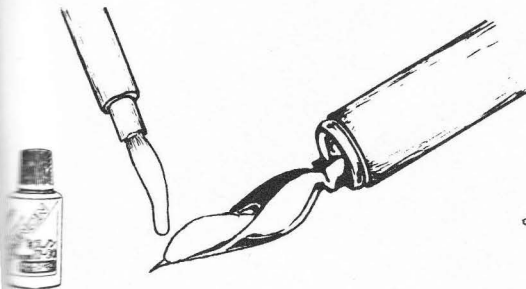
When depicting outer space in manga, compose pictures in a way that creates a sense of distance.

1. Part of a large planet in the foreground
2. Many small stars in the distance
3. In the middle, place planets that are just big enough for you to can discern their patterns.



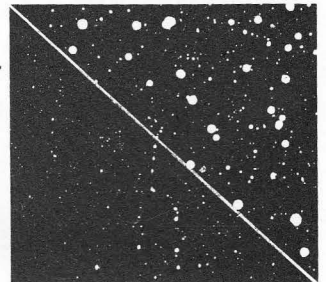
Splatter white correction fluid for the dots representing very small stars.

How to splatter correction fluid



Dots will be small if you do it close to the paper.

Dots will be large if you do it away from the paper.



③ Done

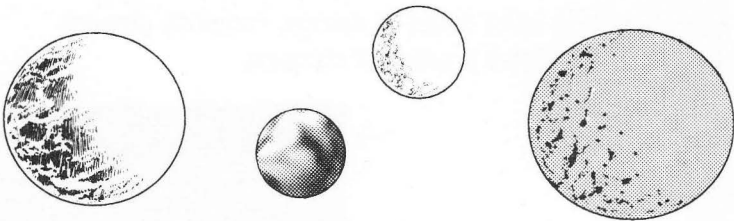
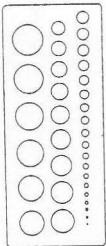
① Put oil-based correction fluid on tip of pen

② Flick with brush

Column: Correction fluid will splatter in the general vicinity, so put tape around the manuscript and frame to mask them.

Making planets realistic

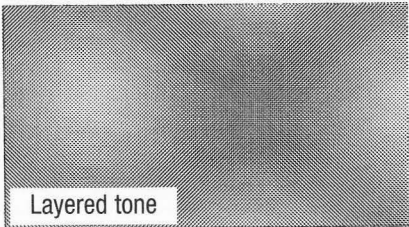
Use a template for planet circles.



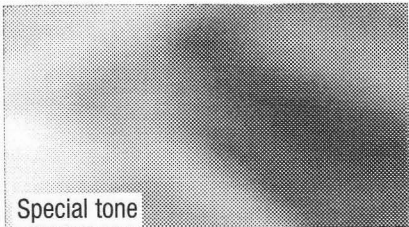
Give planets a touch of color and apply tone to make them round and to make them look heavy.

Representation of outer space

Present the depth and mysteriousness of outer space using special tone patterns and applying layers of tone.



Layered tone



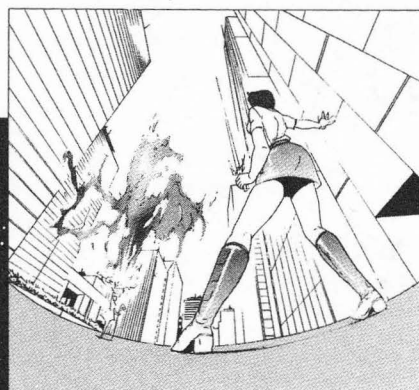
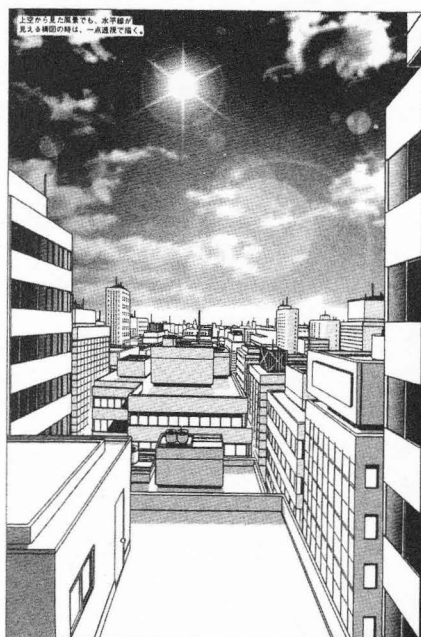
Special tone



Chapter 3

Distance of Natural Objects

Tree-Lined Roads/Light and Shadow/Sky

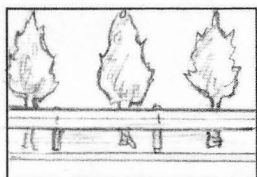


How to Draw Trees

Roadside trees/Tree-lined roads/Shrubbbery

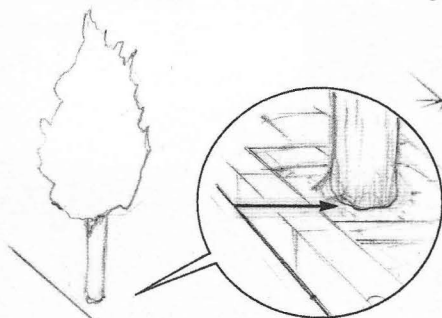
Drawing roadside trees

To draw roadside trees planted at even intervals, choose the positions of the first and second trees and use the technique to an even interval. Think of tree trunks as poles.



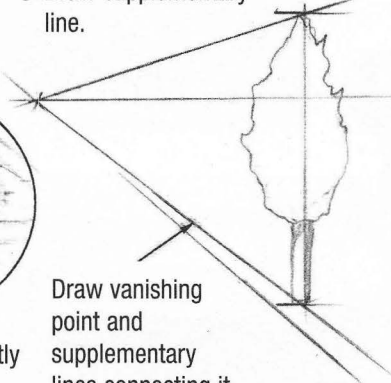
Side view

① Draw one tree



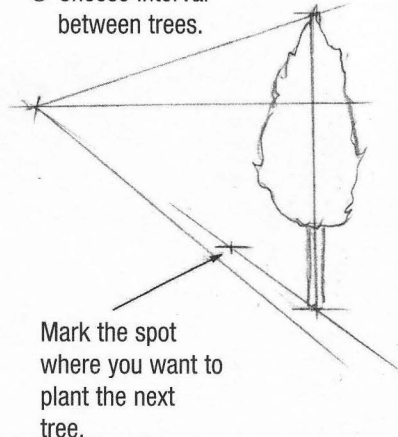
Place on sidewalk slightly away from road line.

② Draw supplementary line.



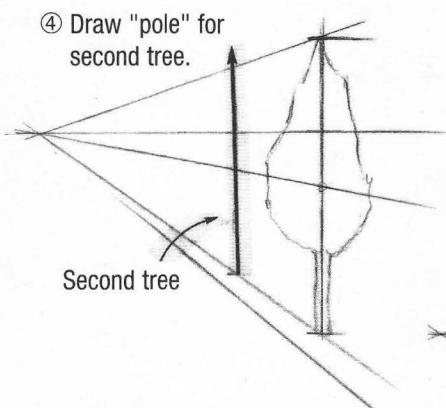
Draw vanishing point and supplementary lines connecting it with tip of the tree and the base.

③ Choose interval between trees.



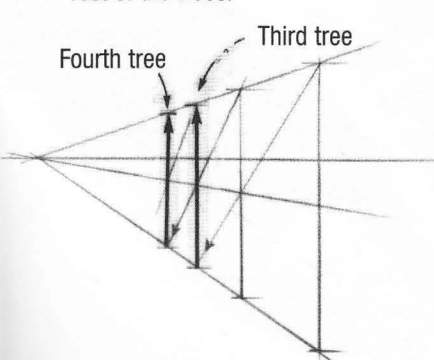
Mark the spot where you want to plant the next tree.

④ Draw "pole" for second tree.



Second tree

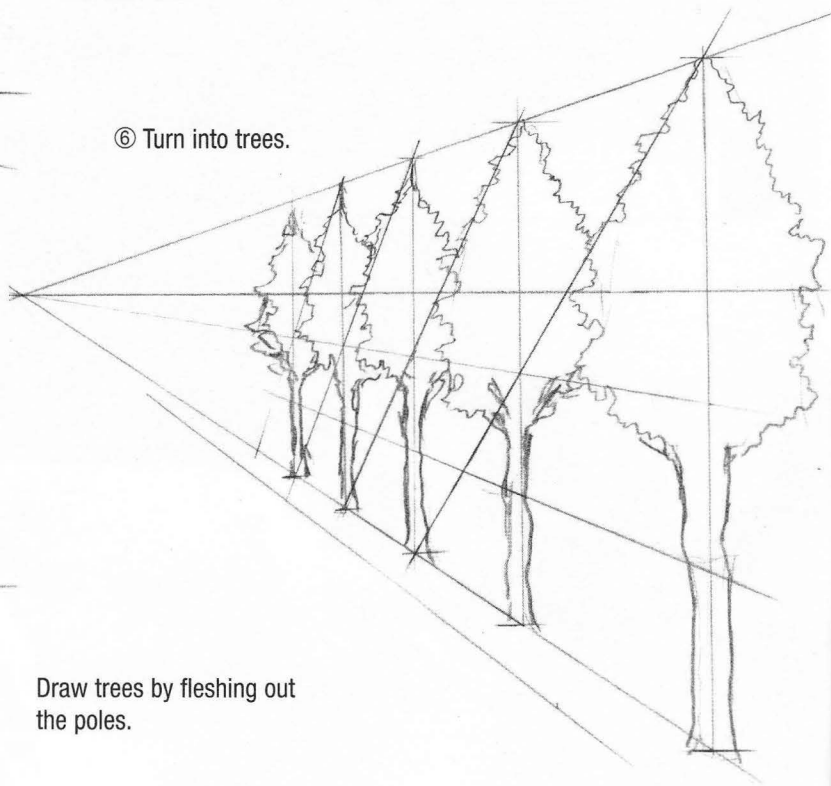
⑤ Determine where to plant the rest of the trees.



Fourth tree

Third tree

⑥ Turn into trees.



Draw trees by fleshing out the poles.

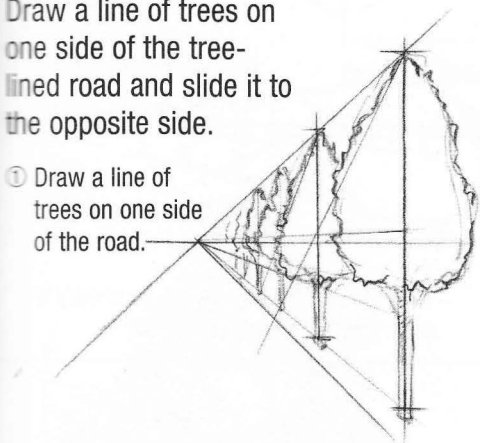
Column: When drawing roadside trees and tree-lined roads, first clearly sketch the road and sidewalk. (Needless to say, you need a vanishing point and horizon.)

Drawing a tree-lined road



Draw a line of trees on one side of the tree-lined road and slide it to the opposite side.

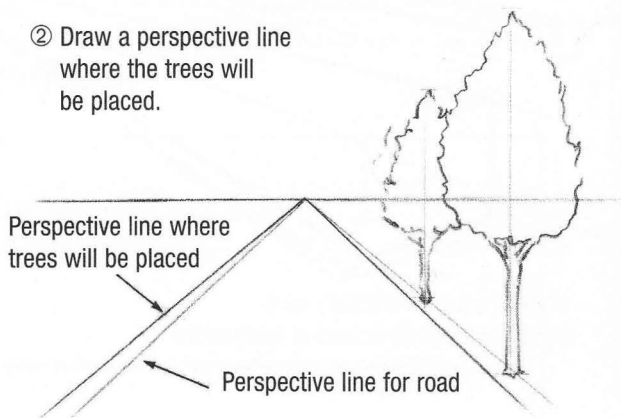
① Draw a line of trees on one side of the road.



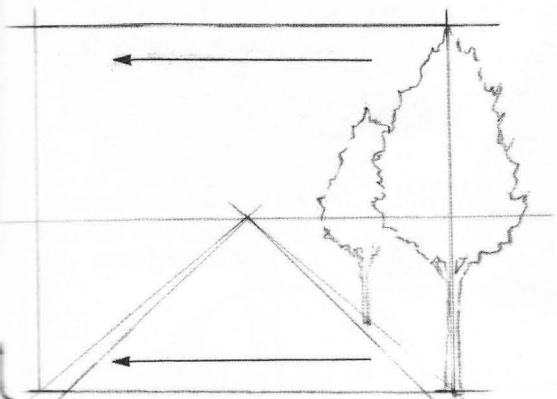
② Draw a perspective line where the trees will be placed.

Perspective line where trees will be placed

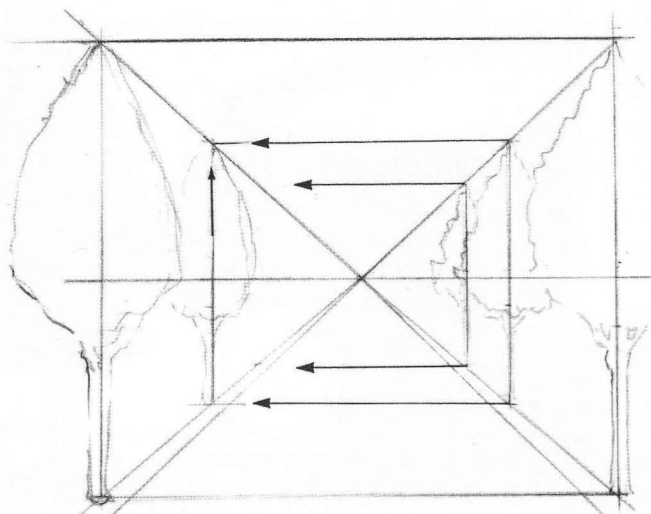
Perspective line for road



③ Slide to the opposite side.



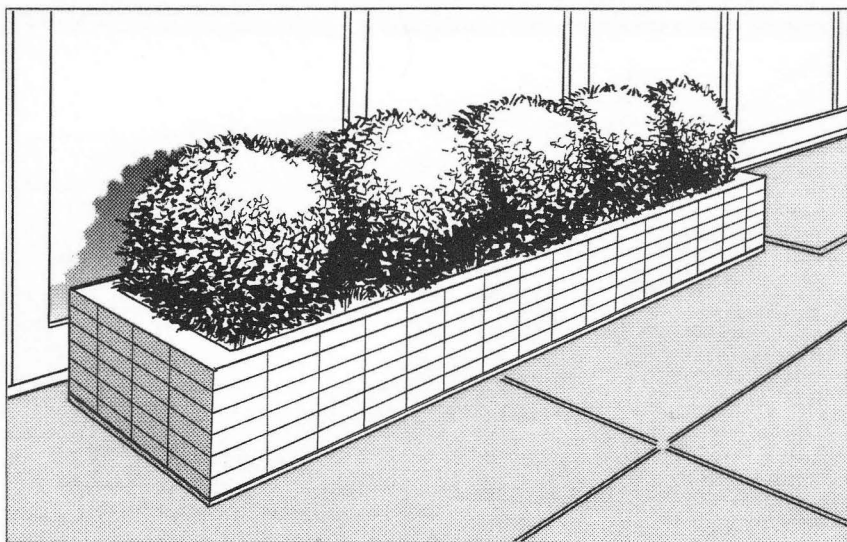
The trick is to raise vertical lines from the perspective line where trees will be placed.



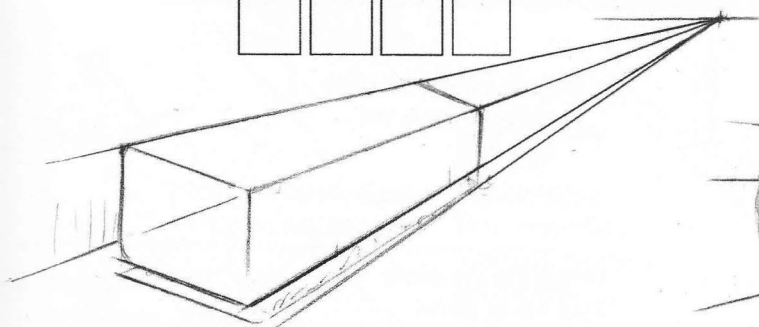
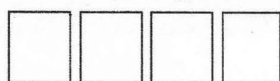
Column: This technique can also be used for drawing opposing doors in condominiums and hotels and opposing windows on trains.

Drawing shrubbery

Shrubbery can be round or square. It is best to simplify it.

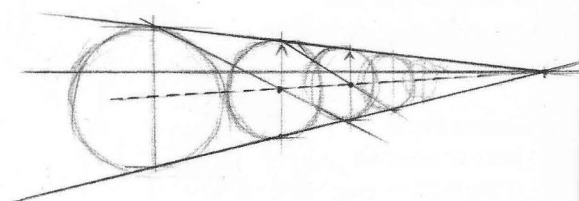
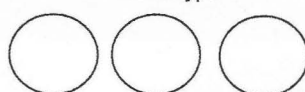


Square type

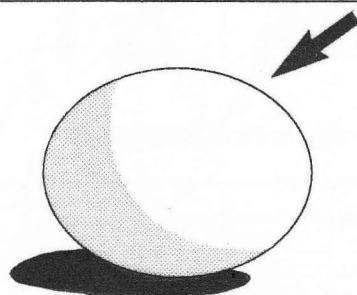
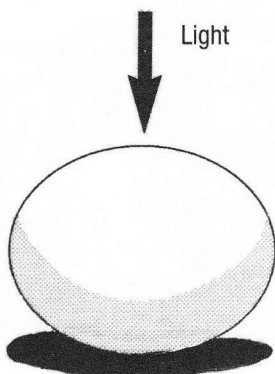
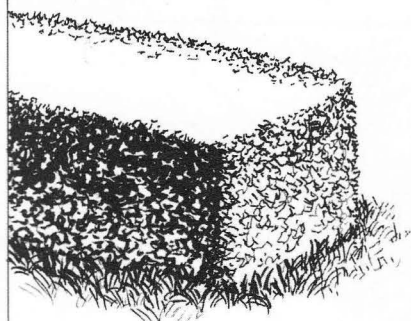


Think of square shrubbery as a rectangular parallelepiped in perspective.

Round type



Like tree-lined roads, round shrubbery is often planted at even intervals.

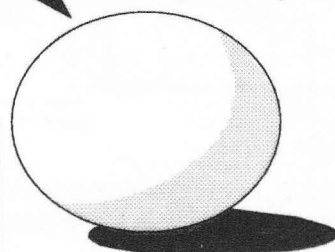


Advice

When drawing trees and shrubbery, think about how light is hitting them.

Point

A tree consists of leaves and a trunk. There is no need to draw everything. In the case of both trunks and leaves, do not draw the parts with light hitting them. Think about the direction of the light and draw the shadowed parts. Give the trunk the feel of a trunk and leaves the feel of a leaf.



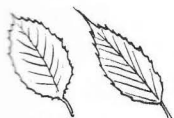
Reference - Leaves of roadside trees



Chinese parasol/Maple



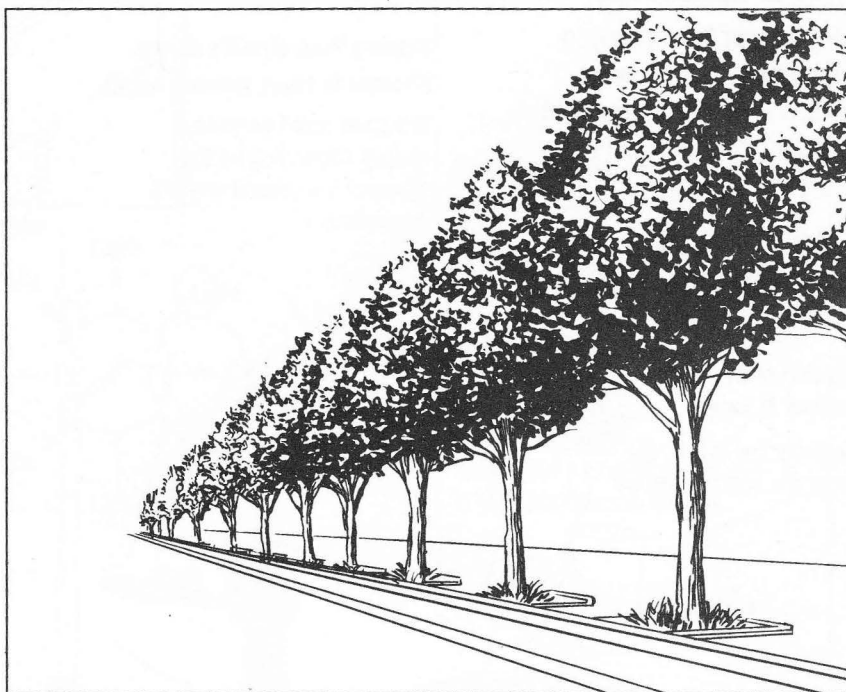
Sycamore



Cherry/Zelkova



Chinaberry/False acacia



Example: Roadside trees drawn close together



Example: Roadside trees drawn far apart

How to Draw Shadows

Ask yourself the following questions when drawing shadows. "What is the light source?" "What direction is the light coming from?"

Sunlight

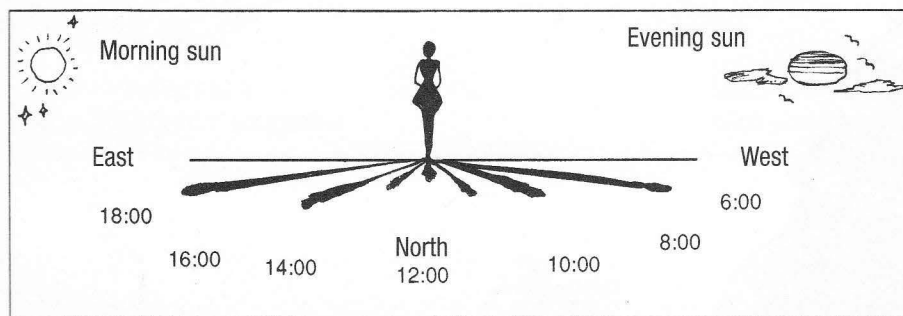
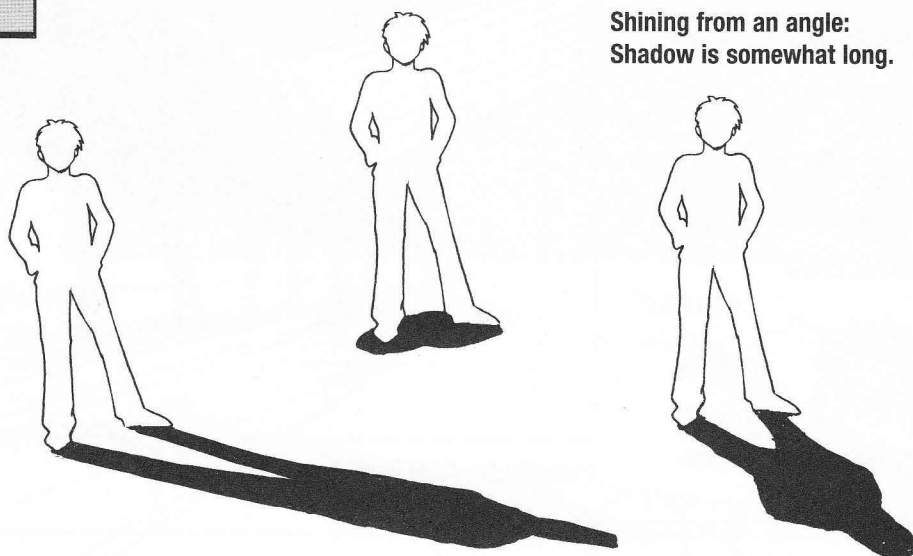
Morning or evening:
Shadow is long.

The lower the sun is, the longer the shadow will be.

Shining from directly above:
Shadow is short (around noon).

Shadows could be various shapes depending on the shape of the ground and the presentation.

Shining from an angle:
Shadow is somewhat long.



The lengths of shadows created by sunlight are different depending on the time of day.

When drawing shadows in manga, choose the length and direction of shadows by thinking about what time of the day it is.

Shadows below eaves

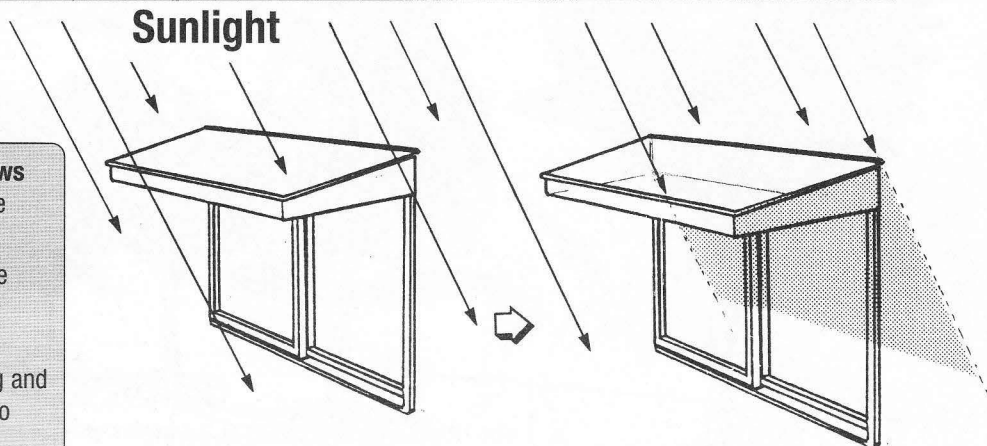
Sunbeams and shadows

Shadows are long in the morning and evening.

Shadows are dark in the summer — Make them solid.

Rays are weak in spring and fall, so shadows are also light — Use tone and diagonal lines.

The rays of the sun reach the earth as parallel lines.

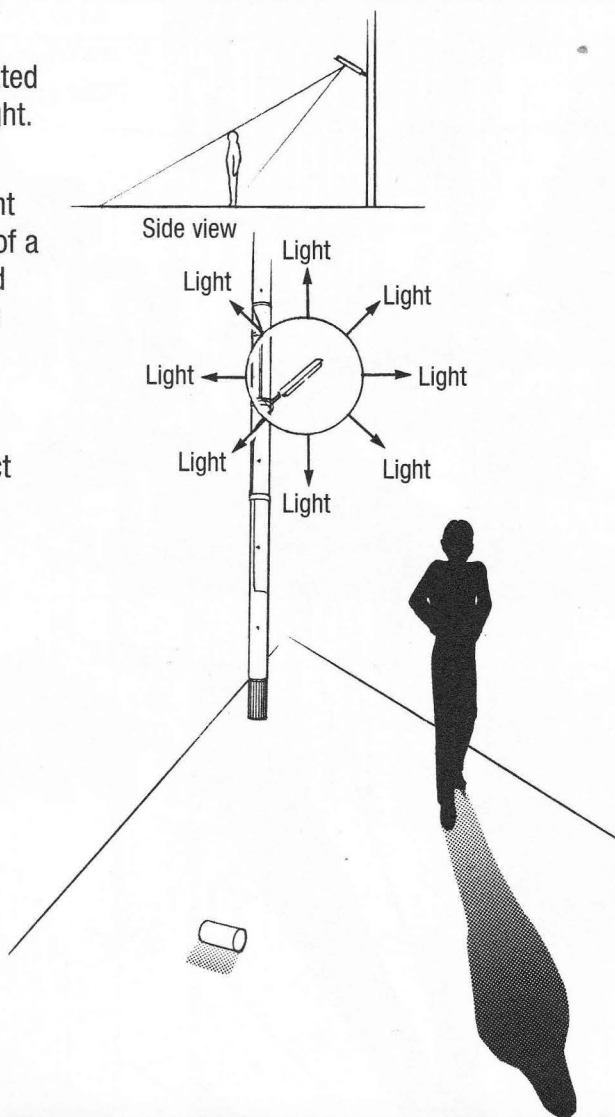


Shadows are in line with the rays of the sun.

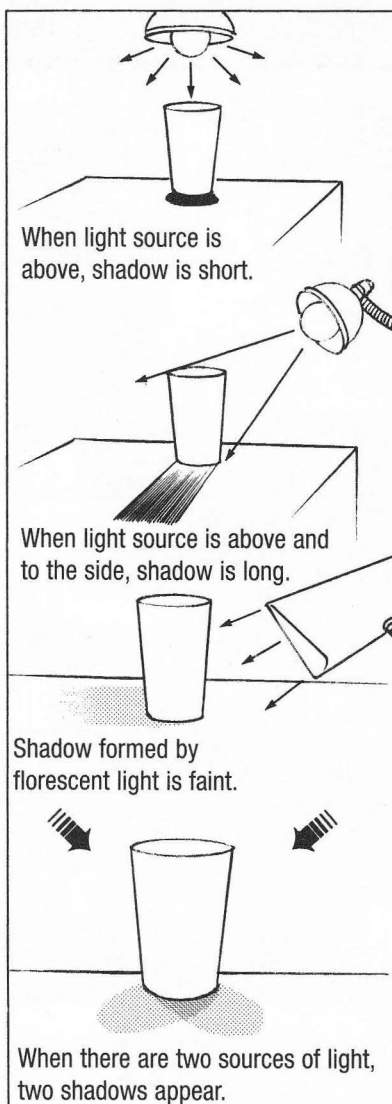
Light from streetlights and indoor lights

Perspective is used for shadows created by artificial light.

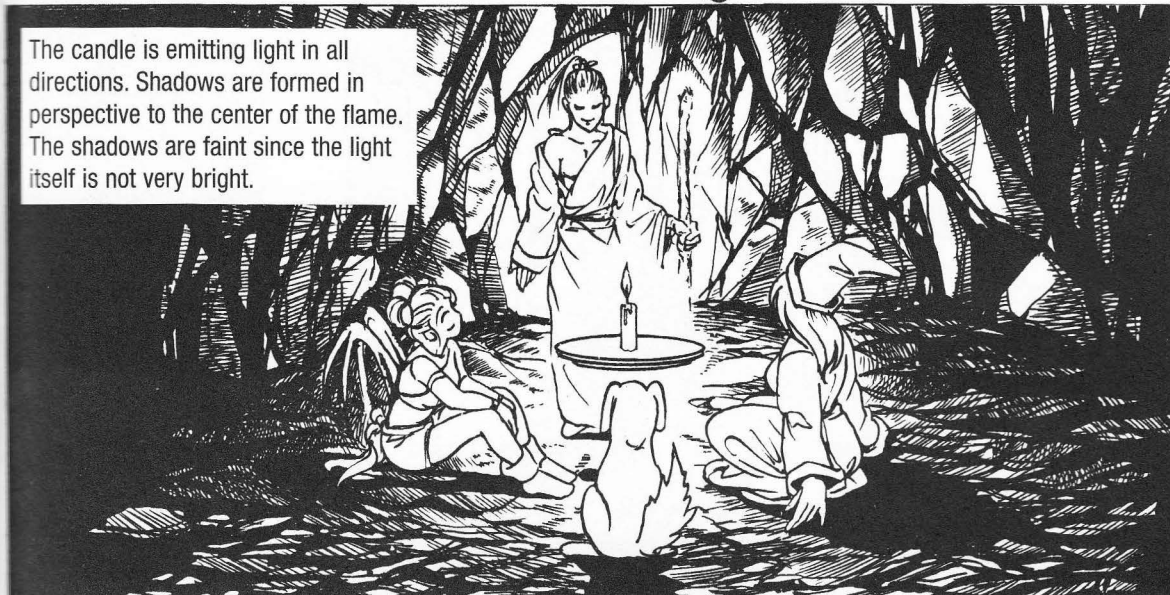
Place the vanishing point in the center of a streetlight and determine the shape of the shadow by connecting it with the object being lit.



Shadows formed by small objects

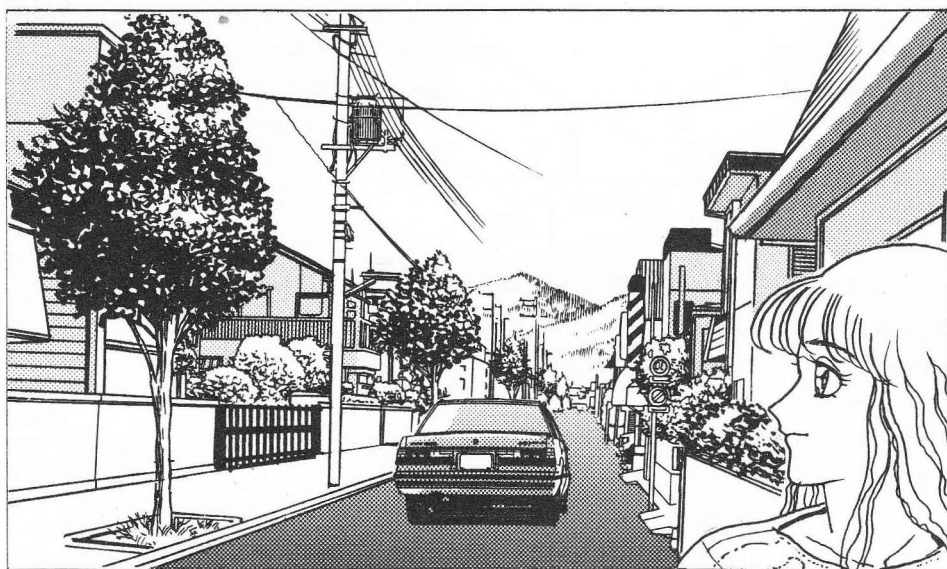


The candle is emitting light in all directions. Shadows are formed in perspective to the center of the flame. The shadows are faint since the light itself is not very bright.



Effective Use of Backgrounds — Basic concepts and techniques

At the heart of this matter is how to place objects. Draw objects in the foreground bigger and objects in the background smaller, and place mid-size objects between them.

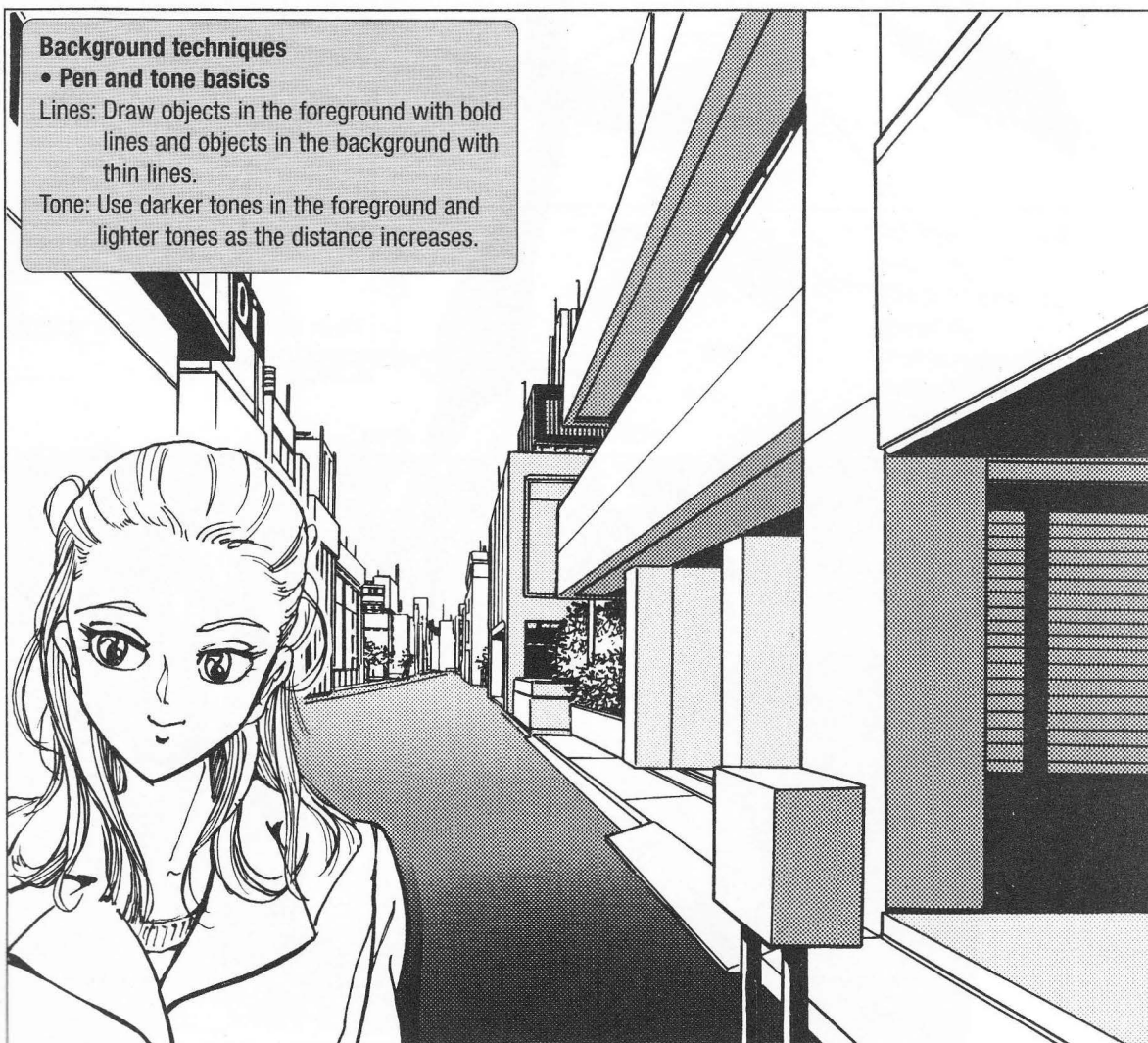


Background techniques

• Pen and tone basics

Lines: Draw objects in the foreground with bold lines and objects in the background with thin lines.

Tone: Use darker tones in the foreground and lighter tones as the distance increases.

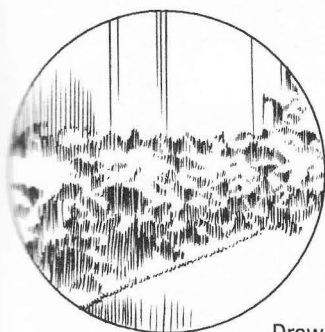


Rain

For rain in town, draw buildings and shadows in a free-hand using short lines.



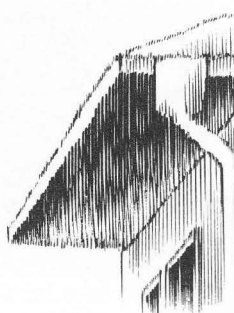
Technique for solid parts



Draw trees and other objects using slanted lines.



Gradate parts in the distance.



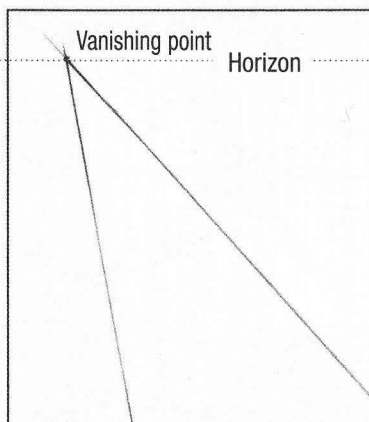
Use slanted lines drawn free hand.



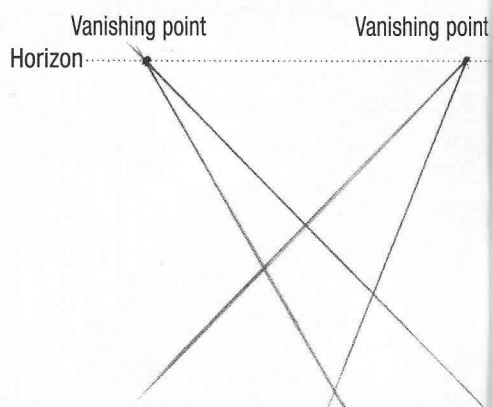
Add rain lines using white correction fluid on solid parts.

Rivers

Draw rivers using the techniques for drawing roads. Choose a vanishing point and draw free hand.



Normal river
(use technique for straight road)



Use two vanishing points for
meandering river.

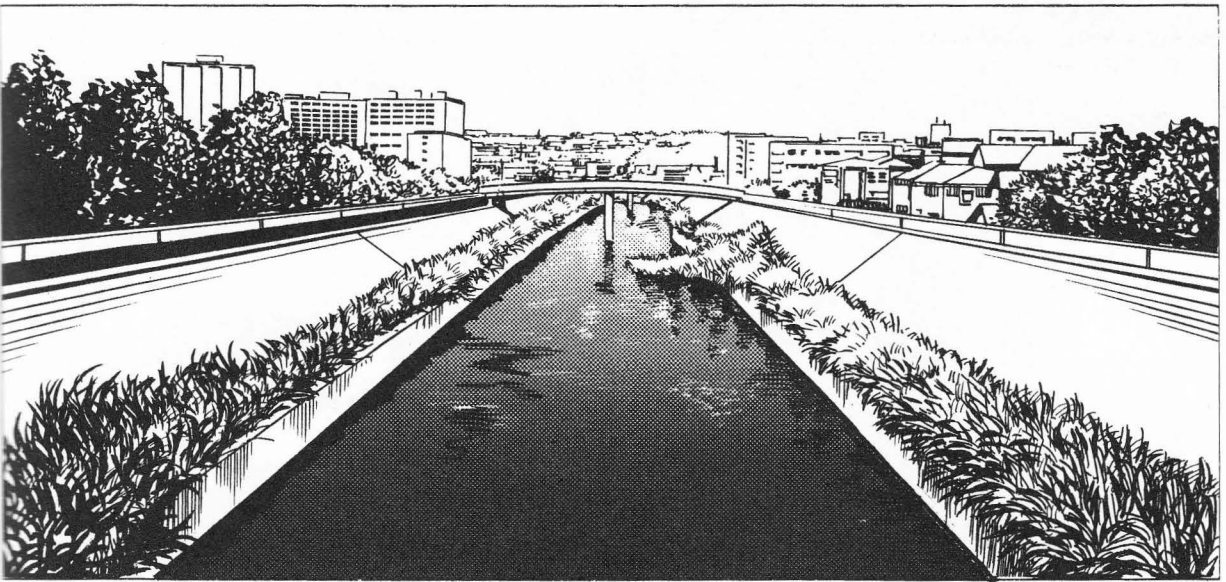


Technique for river surface



① Add touches with pen in accordance with the direction and strength of the current.

② Apply tone and shave.



Clouds

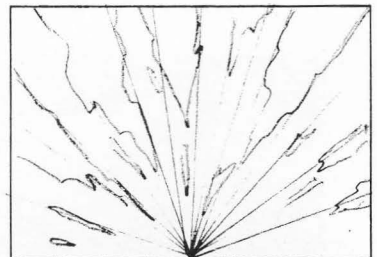
Depending on the clouds, keep perspective in mind when drawing them.



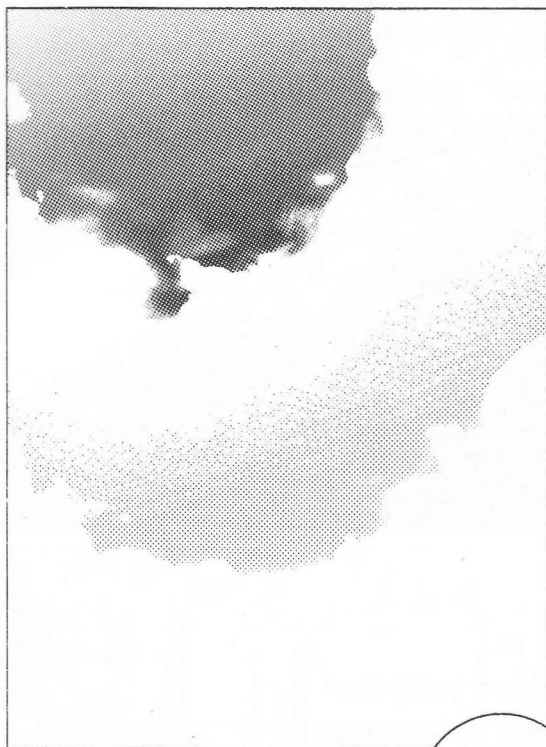
Perspective and natural objects

You can use the concept of perspective without alteration for drawing rivers, mountains and other foreground objects that move off into the distance.

Basically, perspective can be used to draw any object with a sense of distance or any object you want to give a sense of distance.

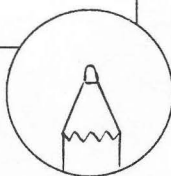


Various techniques for drawing clouds



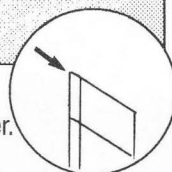
Cumulonimbus

Blur by cutting out, erasing with a sand eraser and shaving.



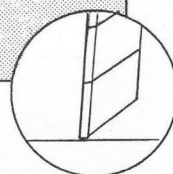
Wispy clouds

Scratch with the tip of a cutter.

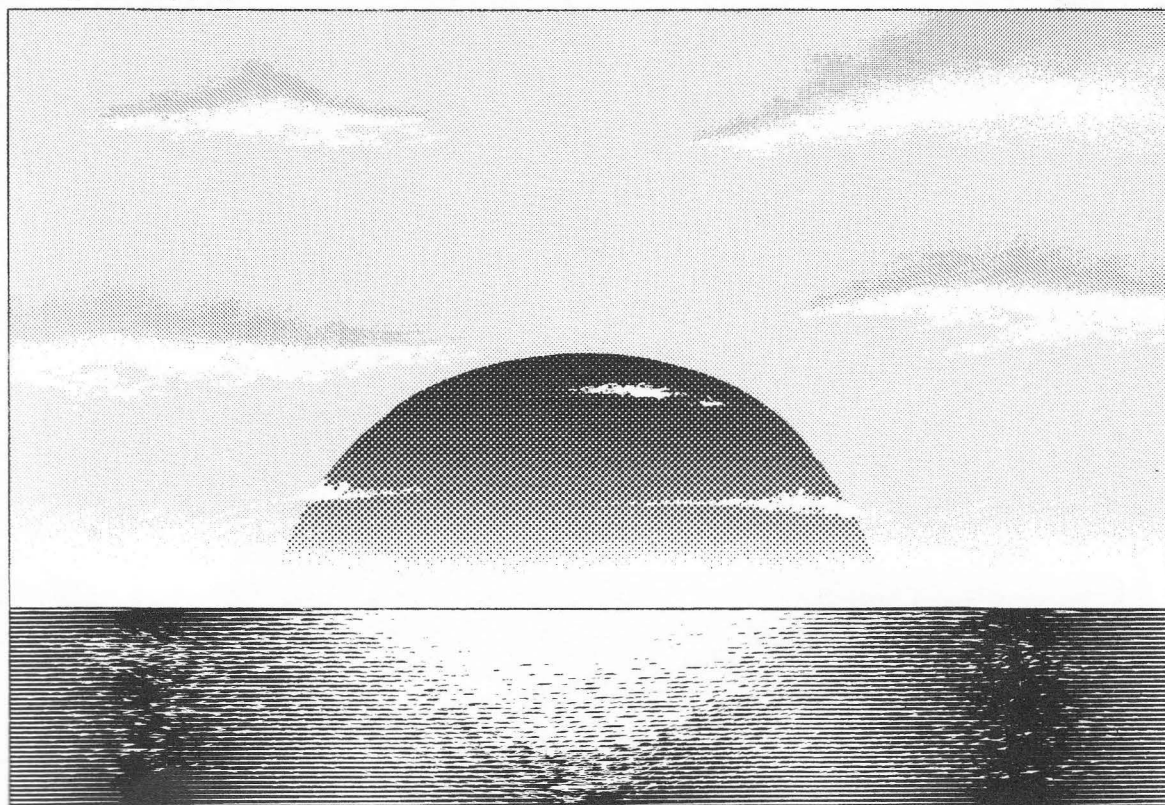


Cirrocumulus

Use the back of a cutter.



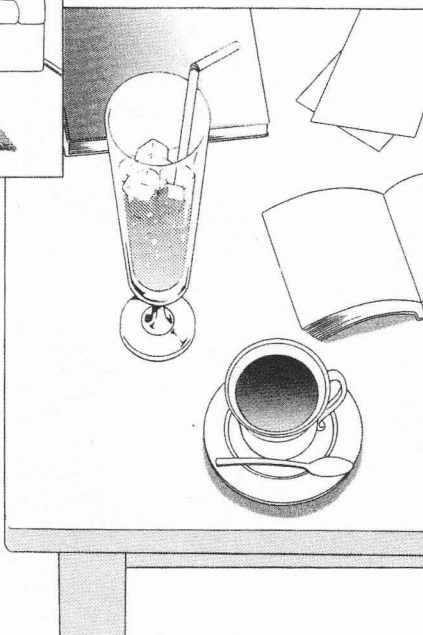
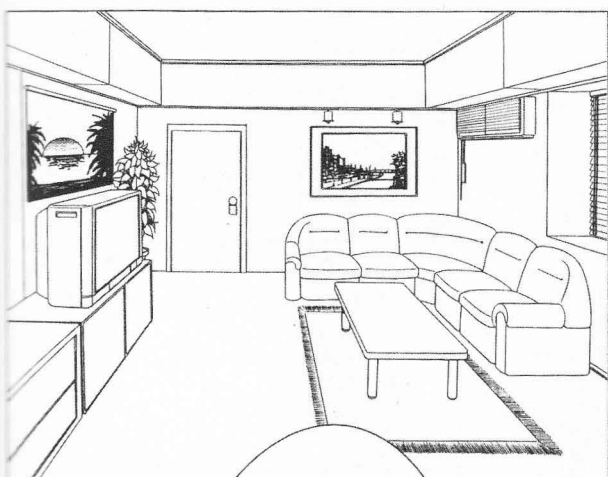
Setting sun Apply layers of tone and shave.



Chapter 4

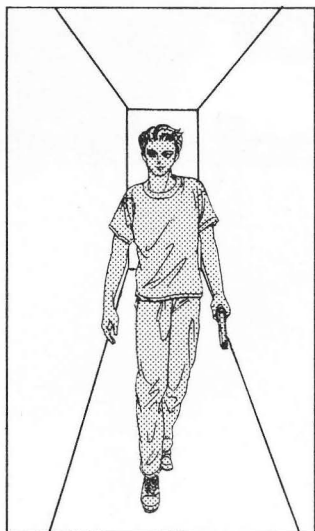
Drawing Indoor Scenes

Hallways/Stairs/Small Objects



How to Make a Narrow Hallway Look Wide

There are two ways to make a hallway in a narrow frame look wide.

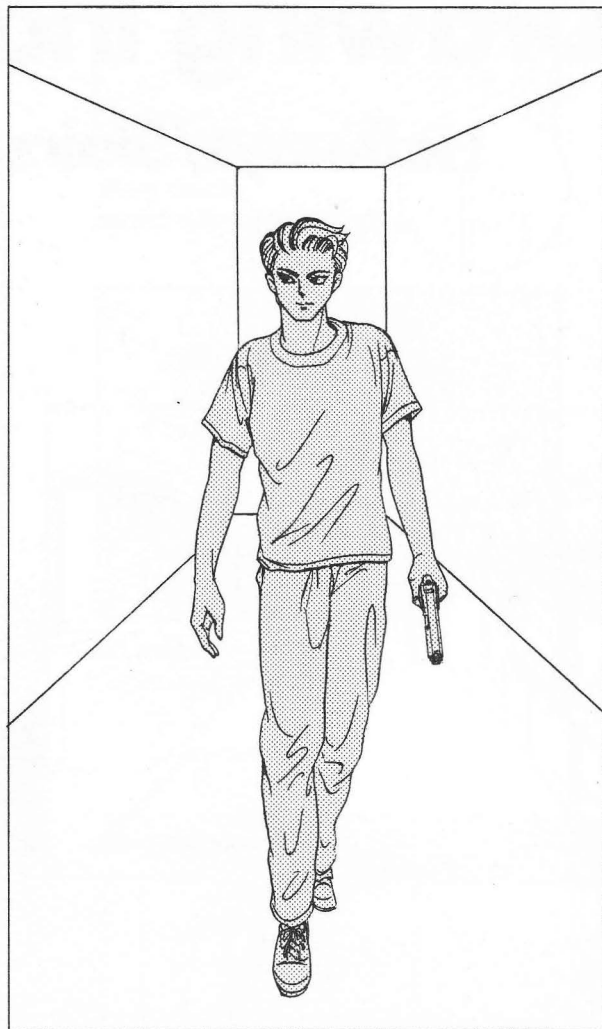


Hallway drawn using regular one-point perspective

② Widen hallway



① Draw using irregular two-point perspective.



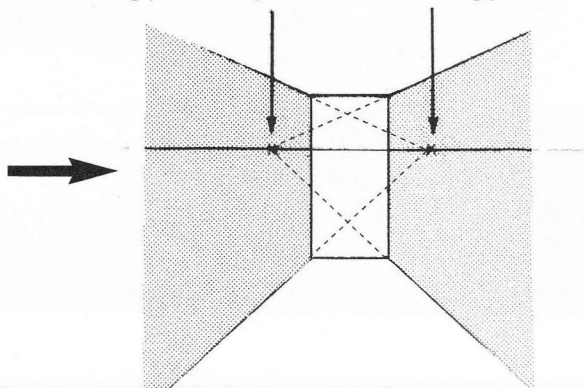
Irregular two-point perspective

Method that uses two vanishing points to draw something normally drawn in one-point perspective (one vanishing point).

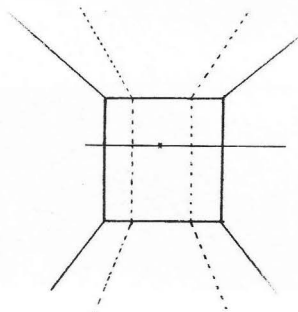
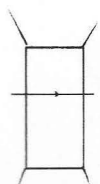
In this instance, you place separate vanishing points for the left and right walls.

Vanishing point for right wall

Vanishing point for left wall



Method to
widen hallway



Use irregular two-point perspective when the width of the hallway is fixed due to the setting.

Irregular two-point perspective: 1. Distance between two points

The farther apart the two points are, the wider the space will be.

Narrow space

The two points are close together.

When you reverse the points the walls are drawn from, it becomes narrower than one-point perspective (when the two points are close together).

Draw the right wall from the right point and the left wall from the left point.



Use when you want to create tension or pressure.

Wide space

The two points are close together.

The two points are far apart.

The closer the two points are, the closer it will be to one-point perspective.



Irregular two-point perspective: 2. Background

Irregular two-point perspective is a technique used to emphasize buildings in the foreground.

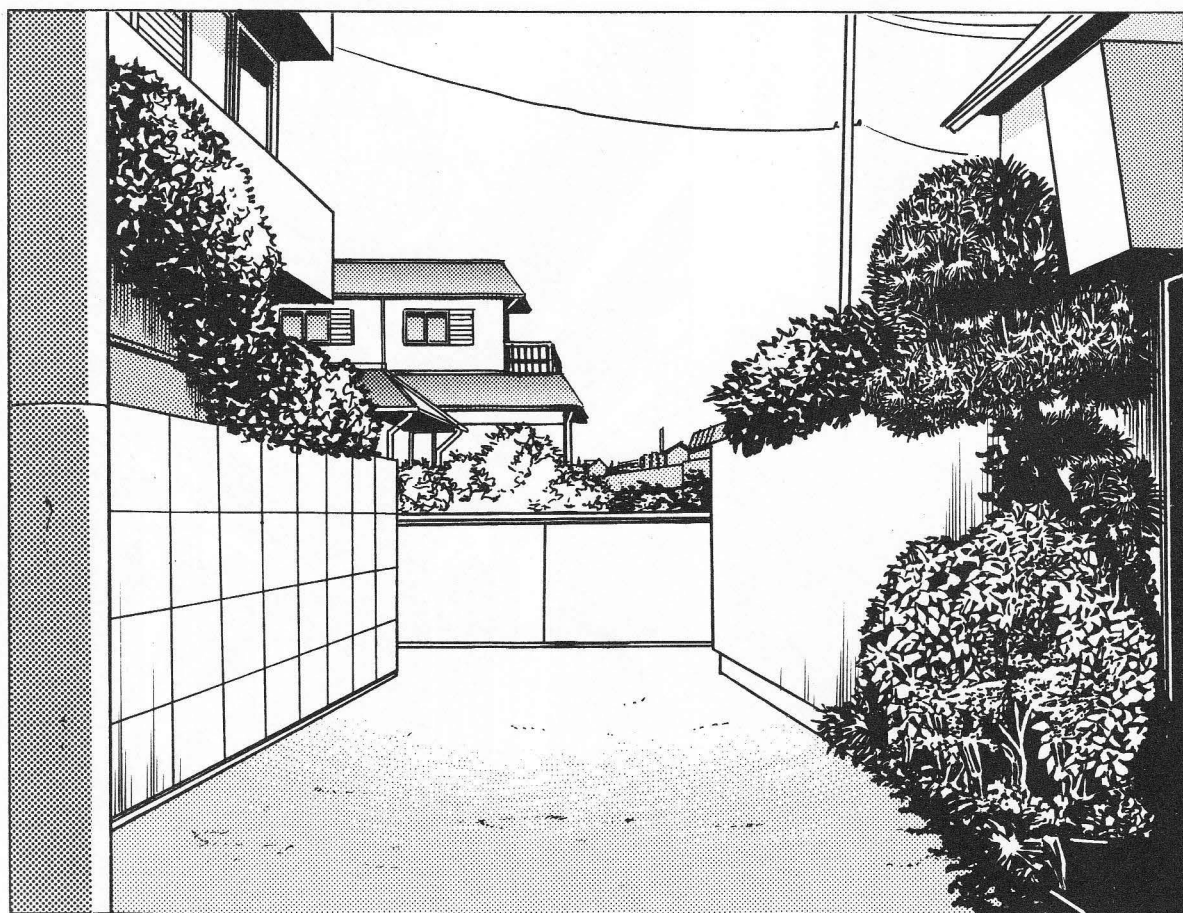
Use this technique when drawing dead ends and T-shaped junctions.



Character background/Town

Point

- This technique is often used for drawing the background when you want to put the character in the center.
- When drawing scenery alone, buildings should end before and after the vanishing points. (unique to this technique)
Example: Dead ends, three-forked roads, insides of cars and airplanes, etc., that serve as a background to characters.
- When using this technique for T-shaped junctions, draw a wall or house directly ahead (on the horizon).

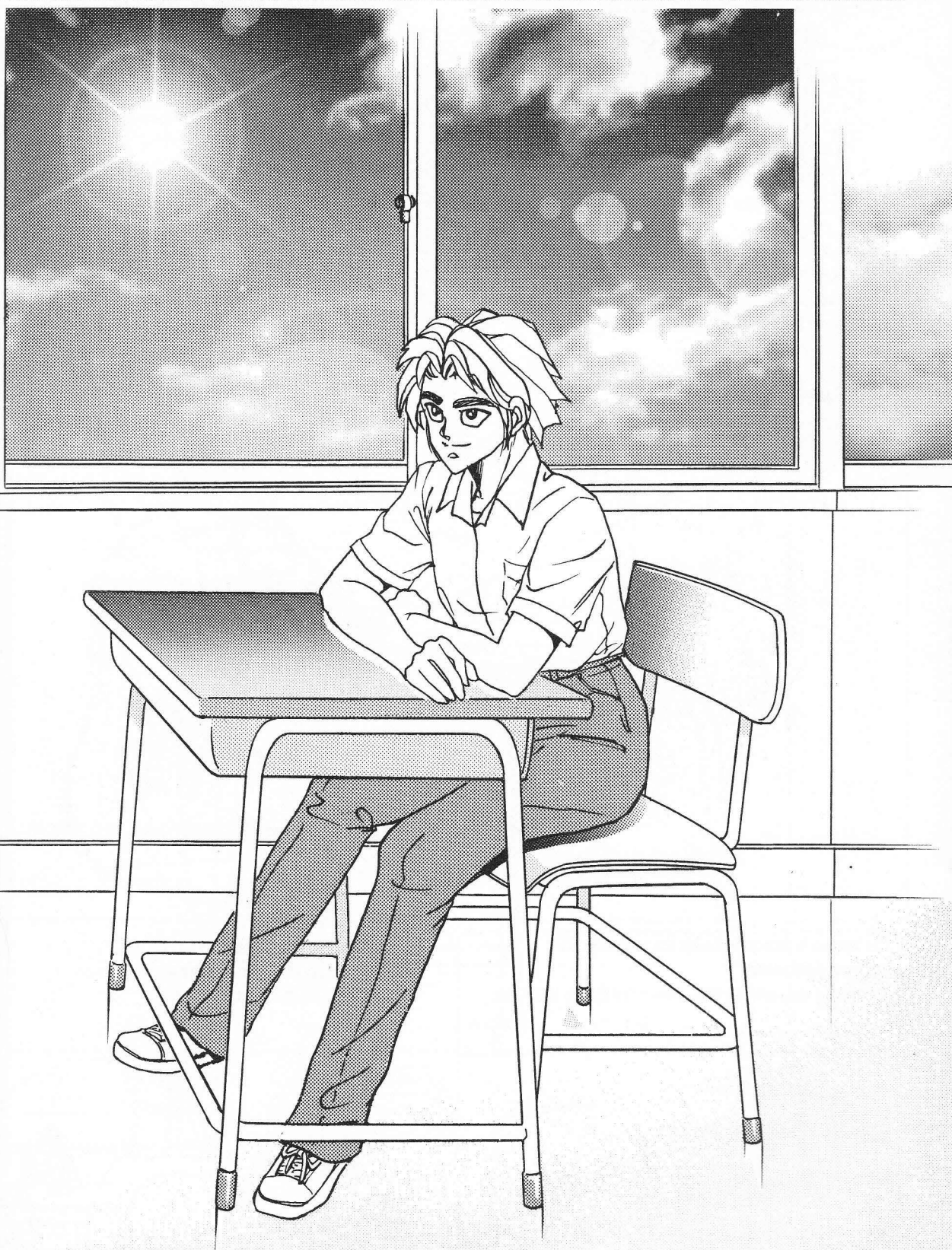


Example: T-shaped junction

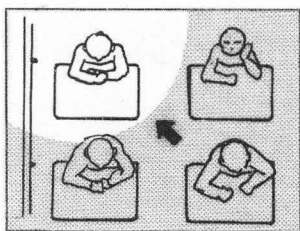
Advice

Irregular two-point perspective comes in handy when you want to make a narrow space (hallway, etc.) look wide or make a scene in a narrow frame look wide.

Classroom: How to Draw Desks



A character sitting at a desk in class. First imagine the composition you want and draw a rough sketch.

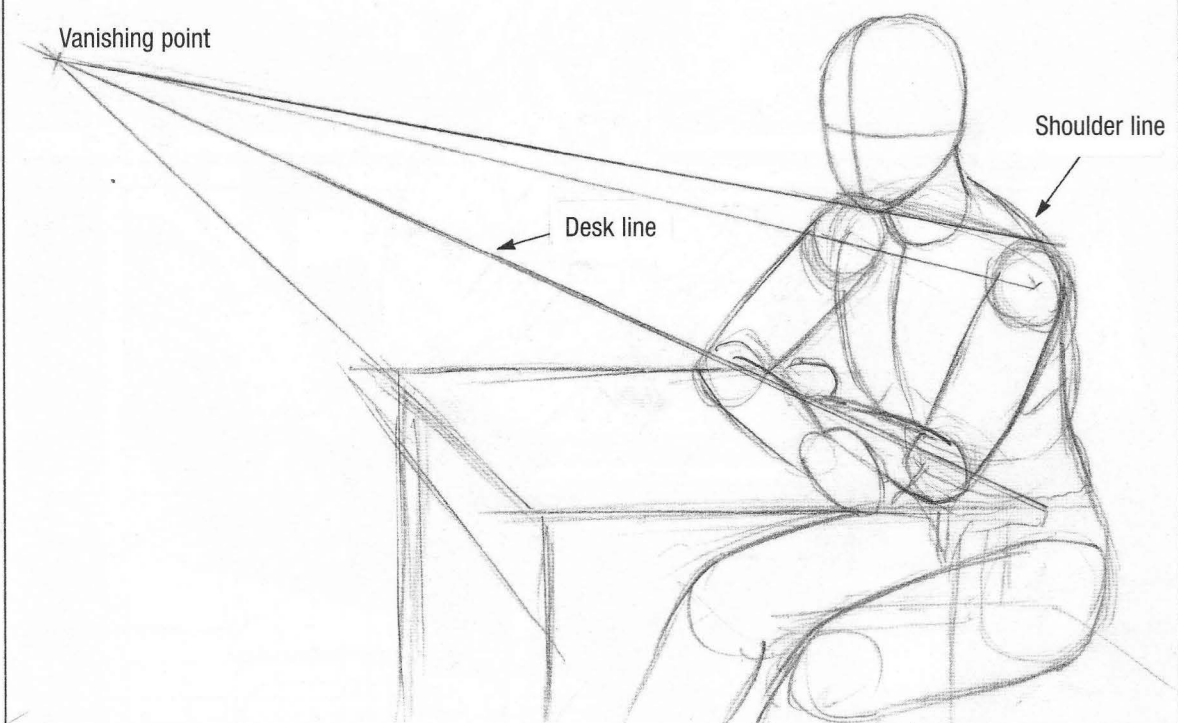


View from above



Rough sketch

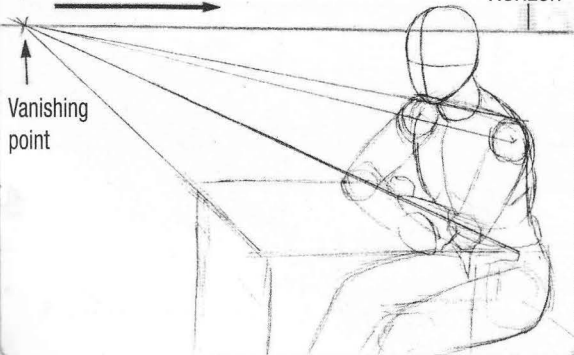
Find the vanishing point from the shoulder line of the character and the desk line.



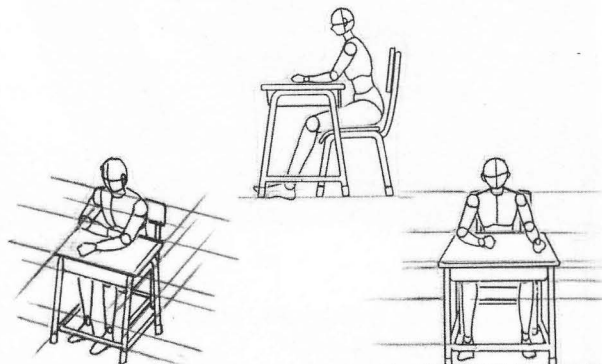
The horizon is determined after the vanishing point has been determined.

After finding the vanishing point, draw a line directly to the side.

Horizon



A character sitting at a desk. The character, chair and desk are usually parallel to each other.



Not drawn in perspective

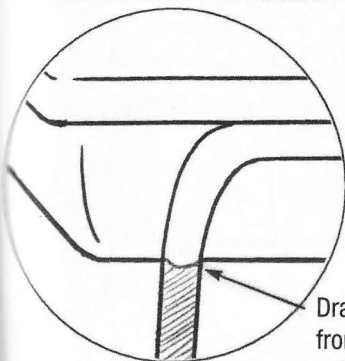
You may draw round corners free hand, but they will look sharper if you use an oval template.

Advice

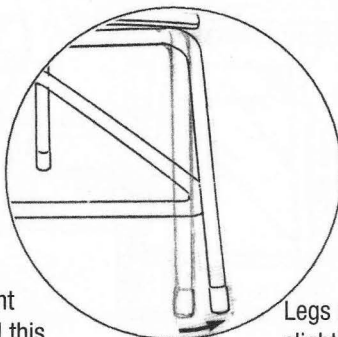
You should also draw the parts that will not be visible.



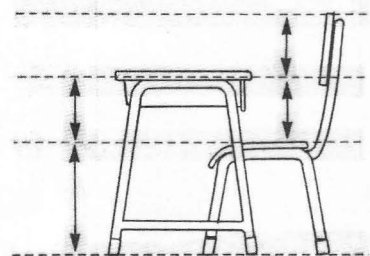
The height of the chair is about half that of the desk.



Draw straight from around this point.



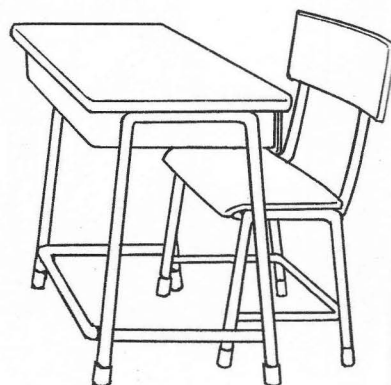
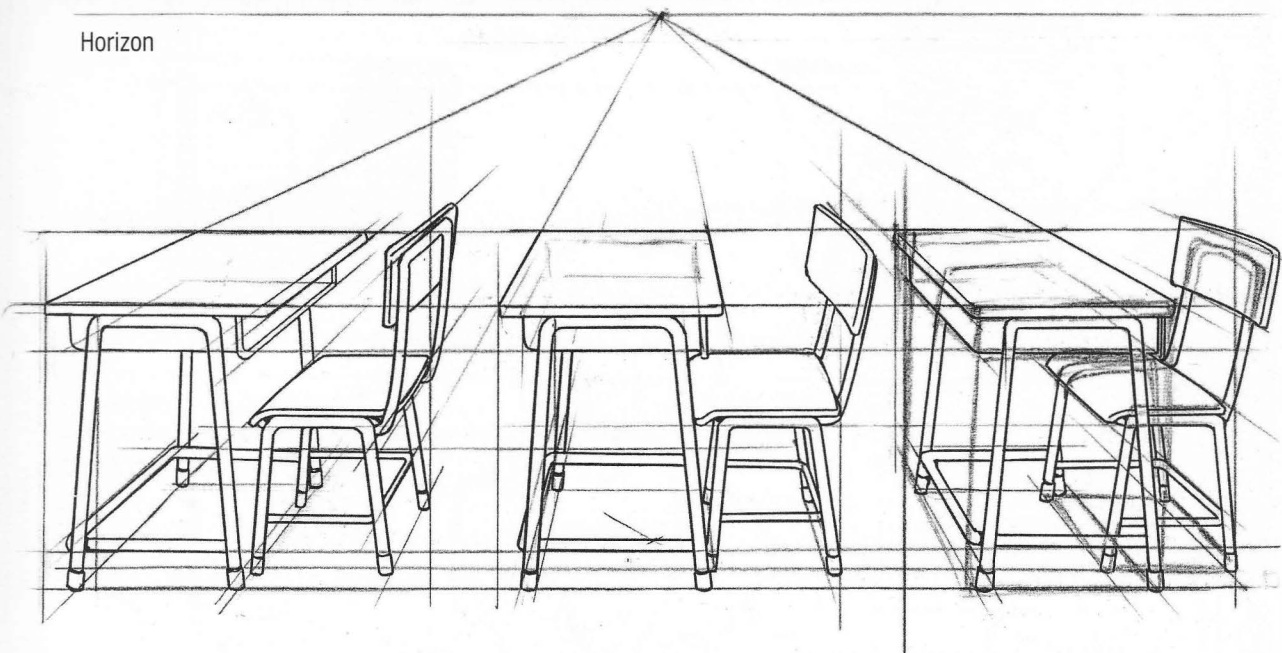
Legs angle out slightly.



Side view

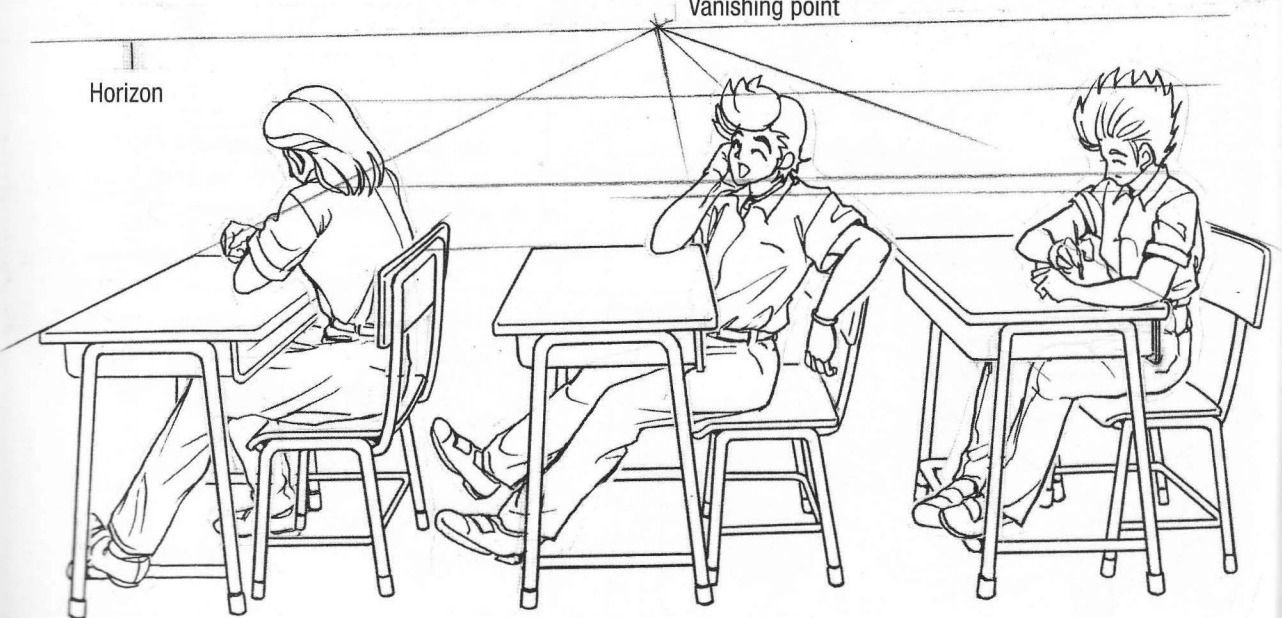
Common chair/desk composition and the horizon

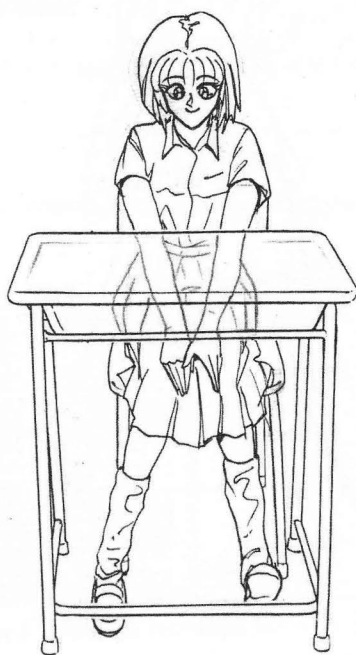
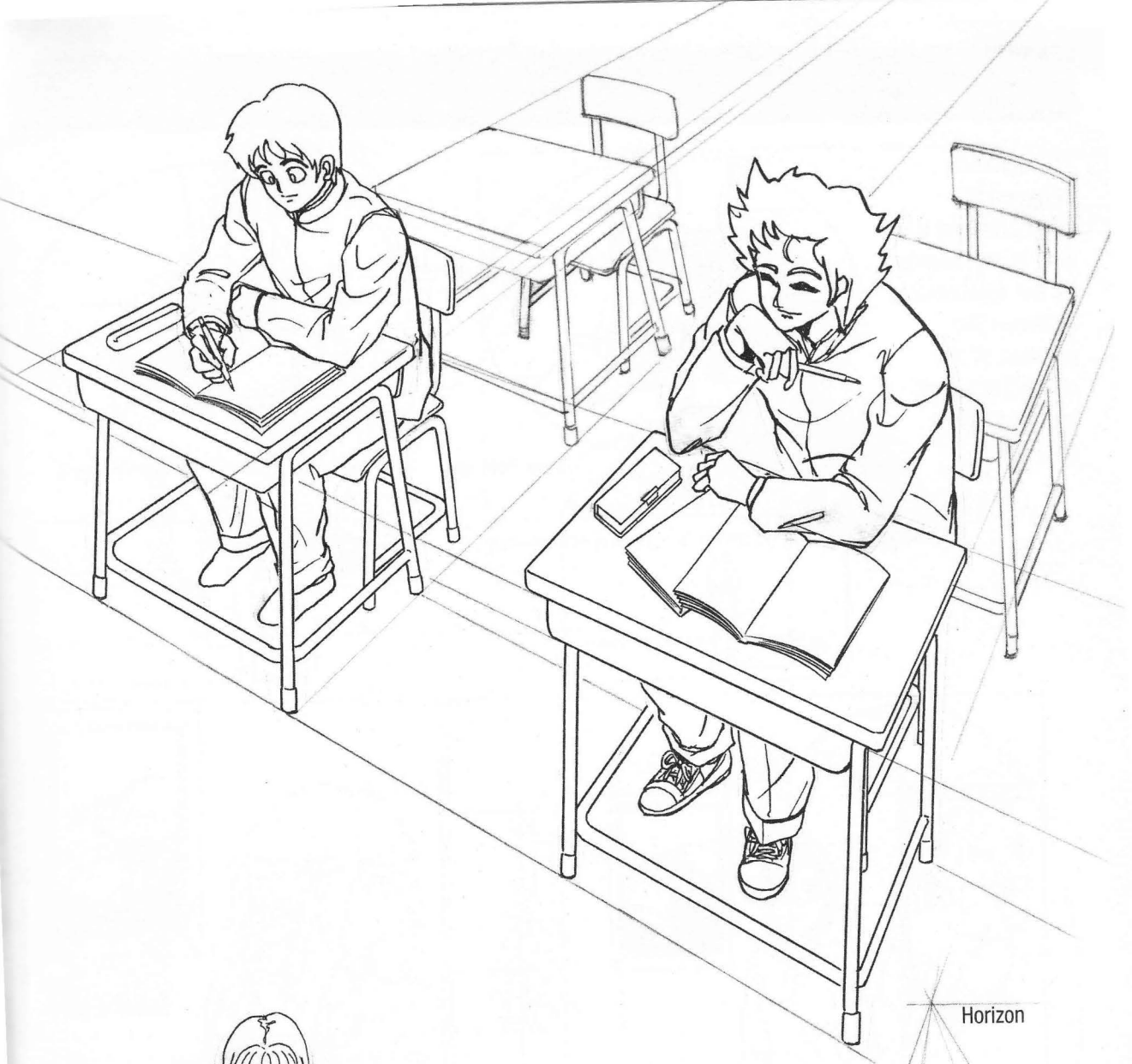
Horizon



Vanishing point

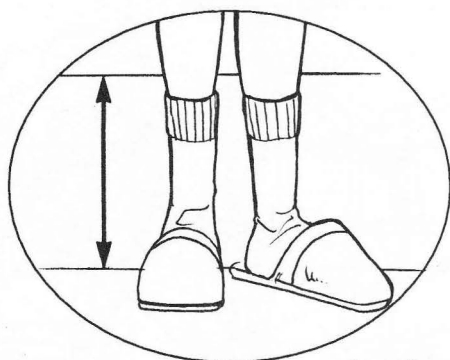
Horizon



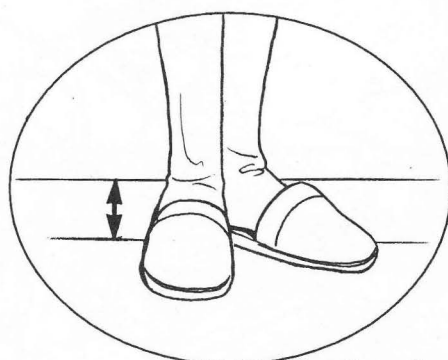


Distance Between Characters and Walls

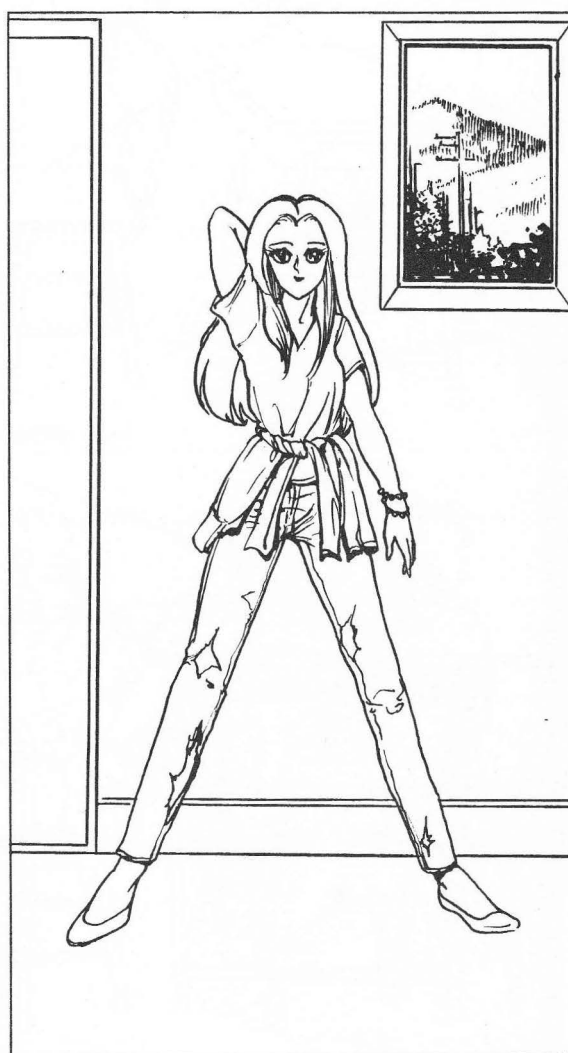
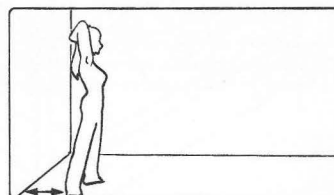
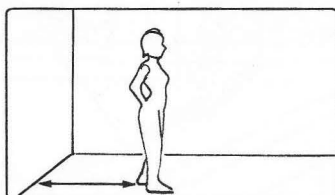
The distance between a character and a wall is represented by the relationship between the position of the character's feet and that of the floor line.



Away from wall



Near the wall



Various ways to create sense of distance between characters and walls



Indicate the presence of a wall by drawing a shadow.



Draw a line separating the ceiling and walls.



Draw a window or bookshelf behind a character.



Give the wall a sense of presence by drawing shadows on both the floor and wall.

Advice

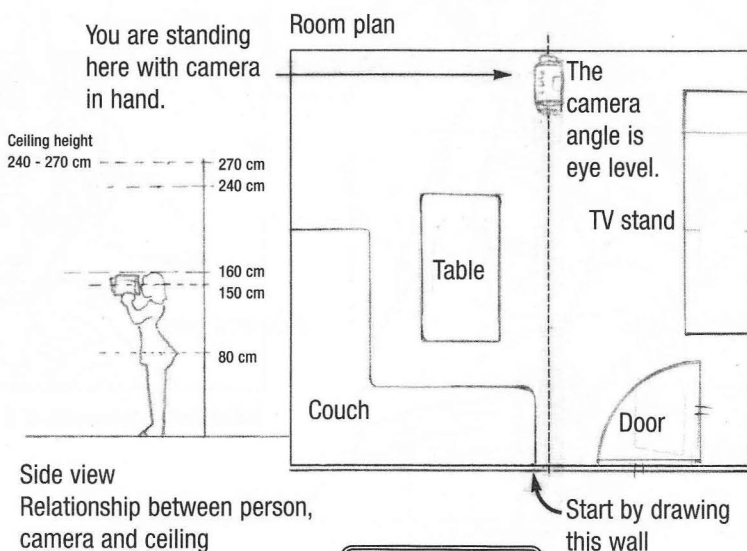
Use shadows and the room layout to create a sense of distance between characters and walls.

How to Draw Indoor Scenes (Living room)

When you want to draw a room with a person sitting on the couch watching TV as seen from one wall, start by drawing an outline of the room.

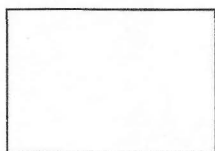
Draw the opposite wall and draw a door, the ceiling, the floor and walls on either side.

Then draw furniture and the person.

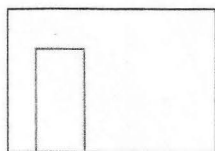


270 cm = 8.86 ft.
240 cm = 7.87 ft.
160 cm = 5.25 ft.
150 cm = 4.92 ft.
80 cm = 2.63 ft.

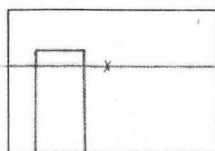
1. Drawing the opposite wall



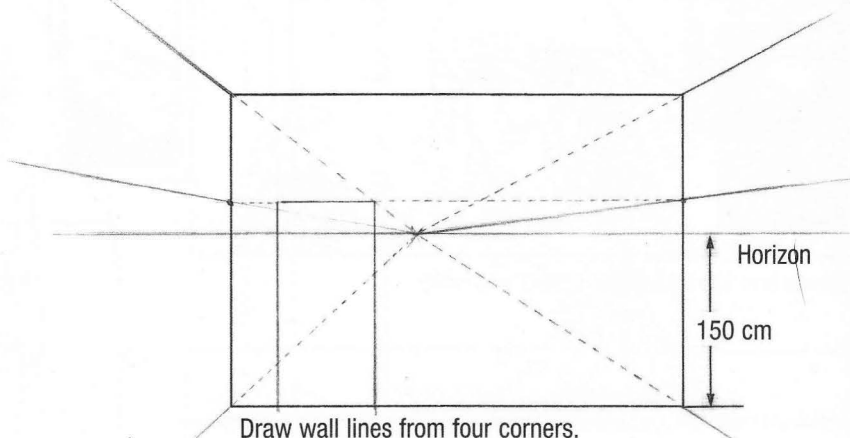
① Draw shape of wall.



② Draw door so it looks natural relative to the ceiling.



③ Determine horizon and vanishing point based on the height of the door.

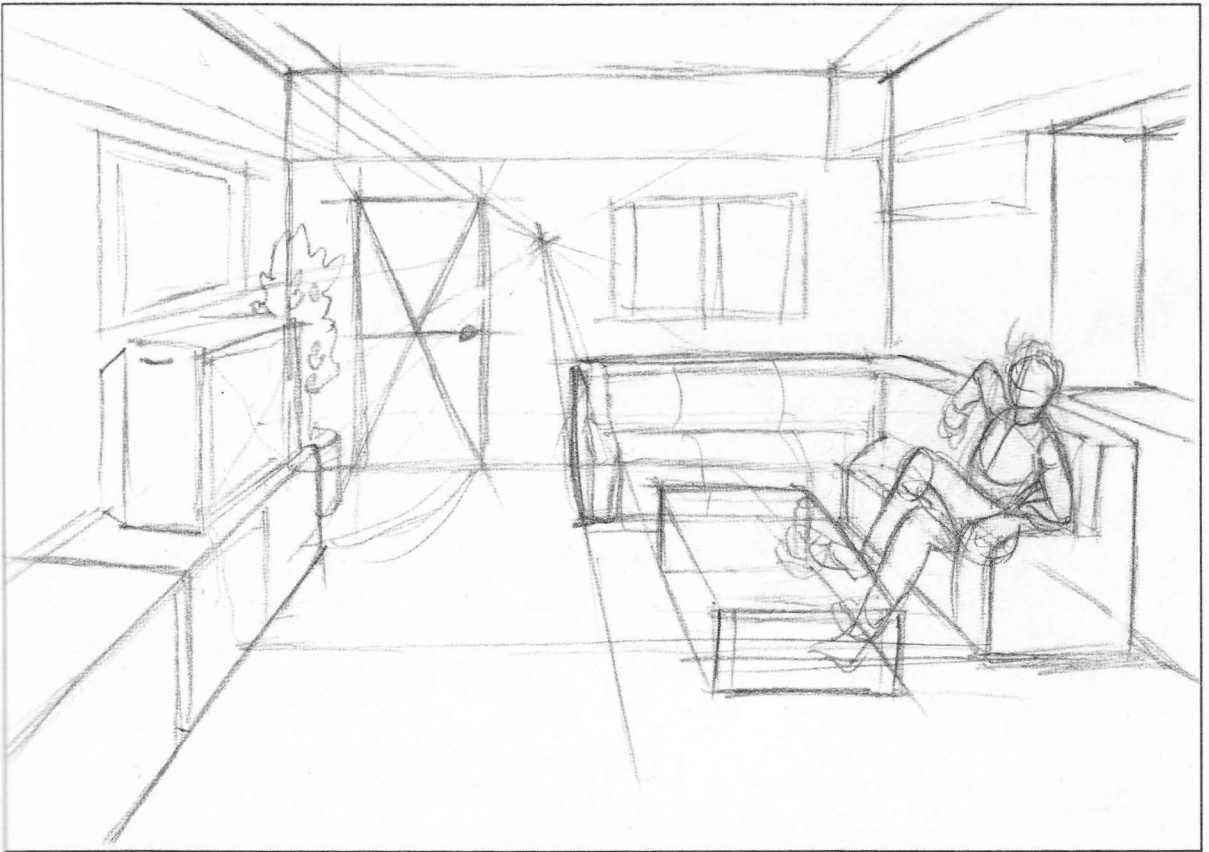


Point

- The room may be any width you choose.
- Since the view is that of a standing person, draw the horizon at about 150 cm. Placing the vanishing point a little to the left or right of center will make the picture look better.
- The ceiling, floor and sidewalls are drawn using lines coming from the vanishing point and passing through the corners.
- Draw a perspective line on the left and right walls that are the same height as the door.

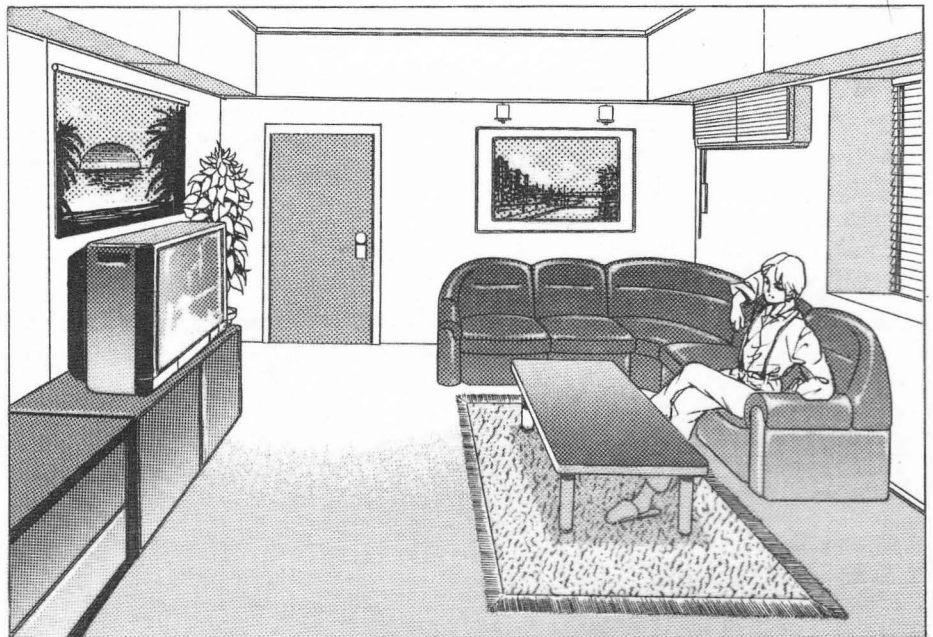
Column: The perspective line that is the same height as the door acts as a guide for determining the height of furniture. Drawing a perspective line with a distinct height is the key to drawing backgrounds in both indoor and outdoor pictures.

2. Drawing a rough sketch

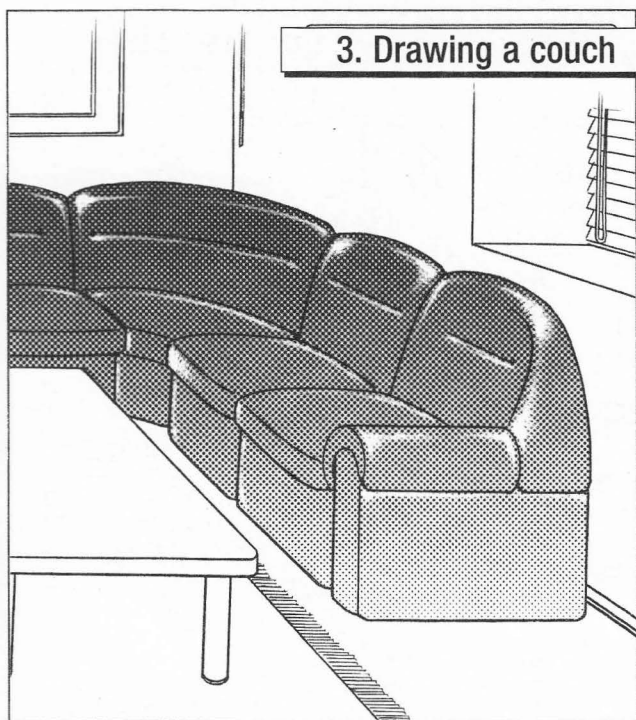


Draw the interior on the basis of the plan.

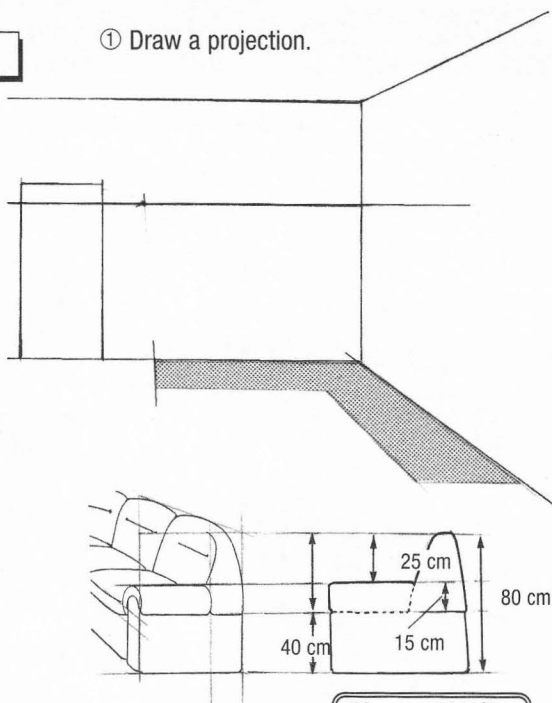
Reference: Completed drawing with character



3. Drawing a couch

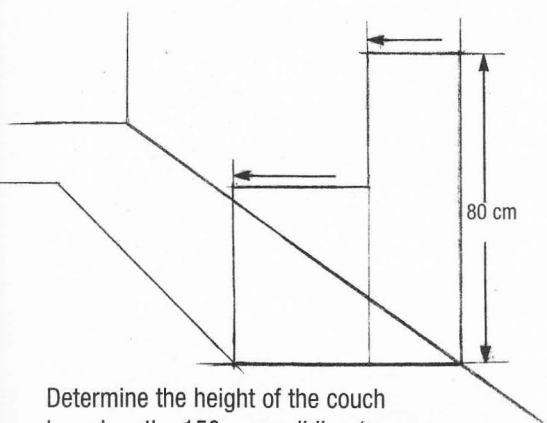


① Draw a projection.

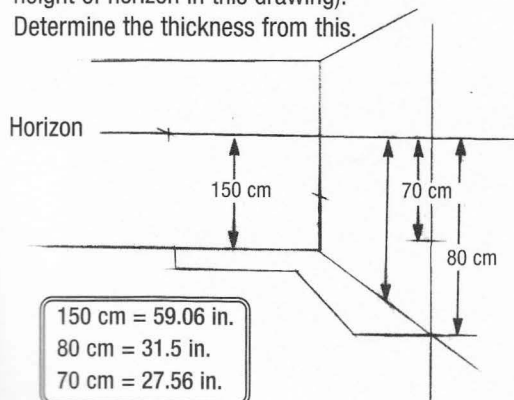


80 cm = 31.5 in.
40 cm = 15.75 in.
25 cm = 9.84 in.
15 cm = 5.90 in.

② Draw thickness.

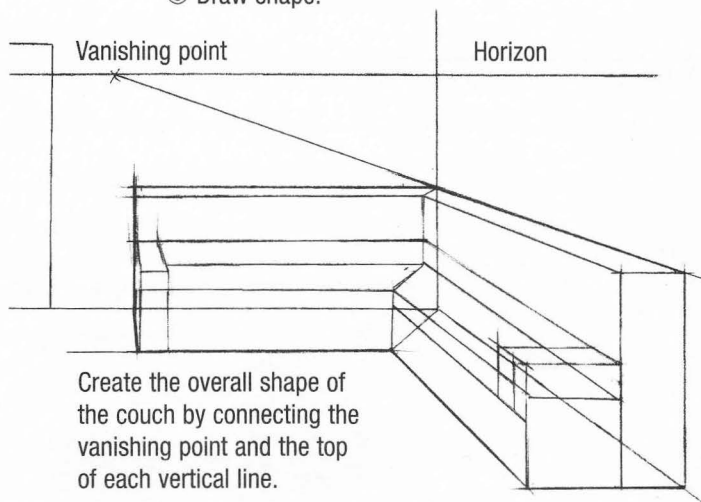


Determine the height of the couch based on the 150-cm wall line (same as height of horizon in this drawing). Determine the thickness from this.

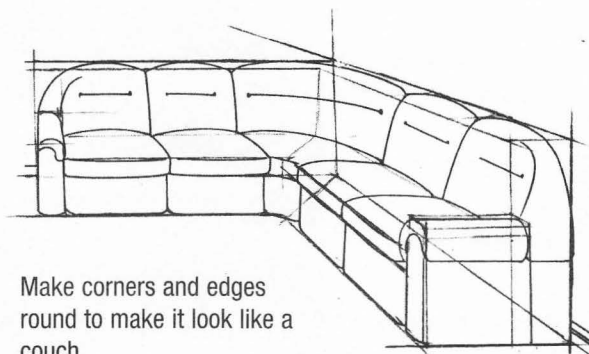


150 cm = 59.06 in.
80 cm = 31.5 in.
70 cm = 27.56 in.

③ Draw shape.

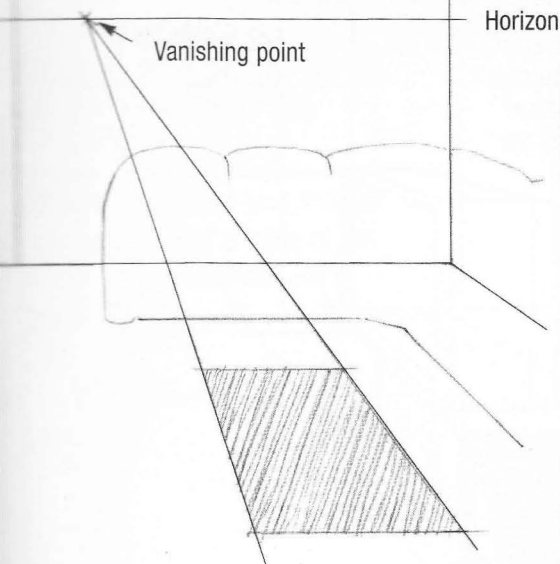


Create the overall shape of the couch by connecting the vanishing point and the top of each vertical line.

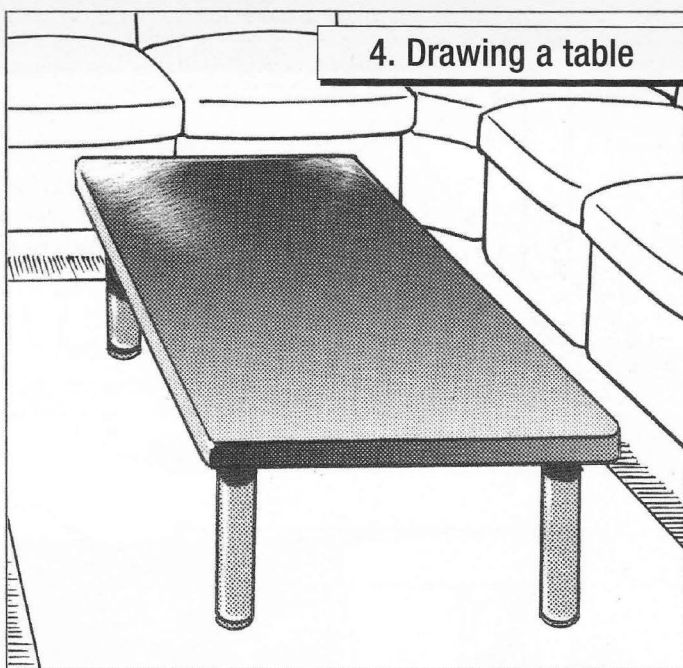


Make corners and edges round to make it look like a couch.

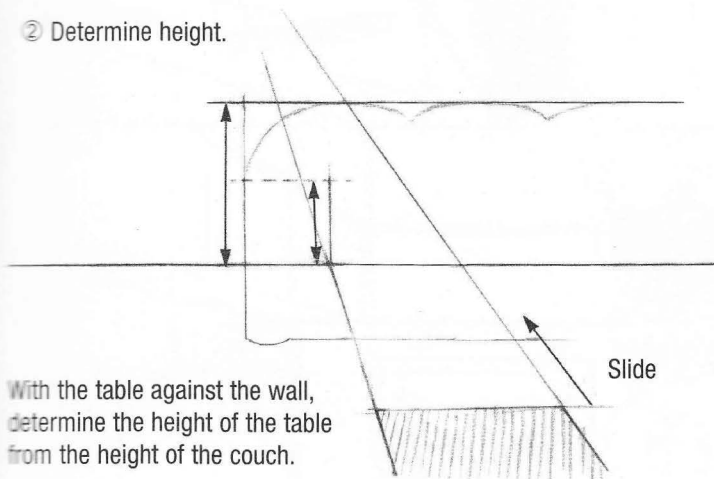
① Draw a projection.



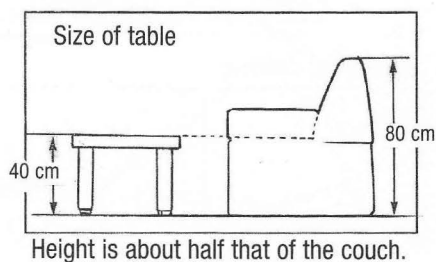
4. Drawing a table



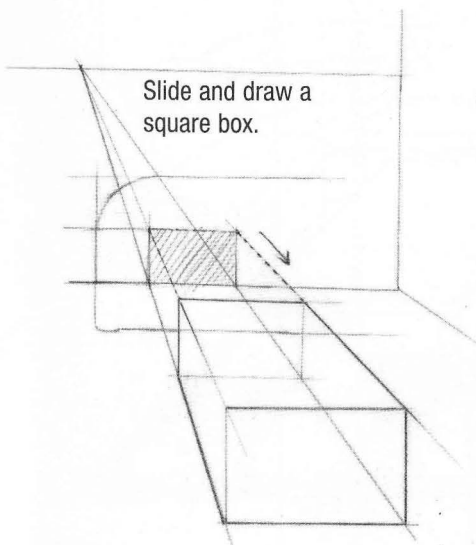
② Determine height.



With the table against the wall, determine the height of the table from the height of the couch.

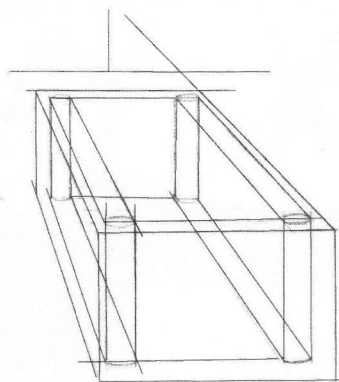


80 cm = 31.5 in.
40 cm = 15.75 in.



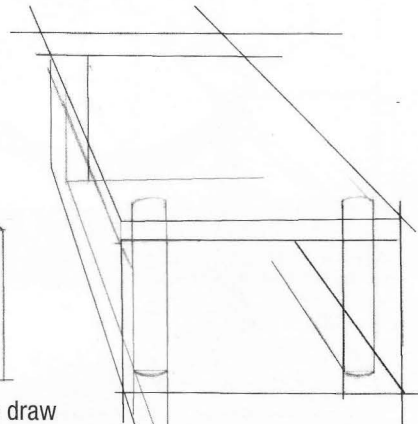
Slide and draw a square box.

③ Draw shape.



When drawing the legs, also draw the portions that will not be visible.

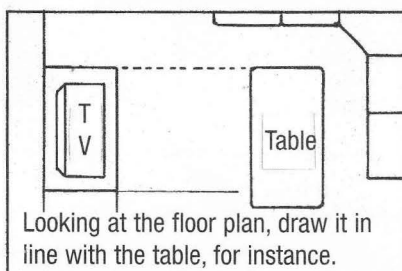
④ Add thickness.



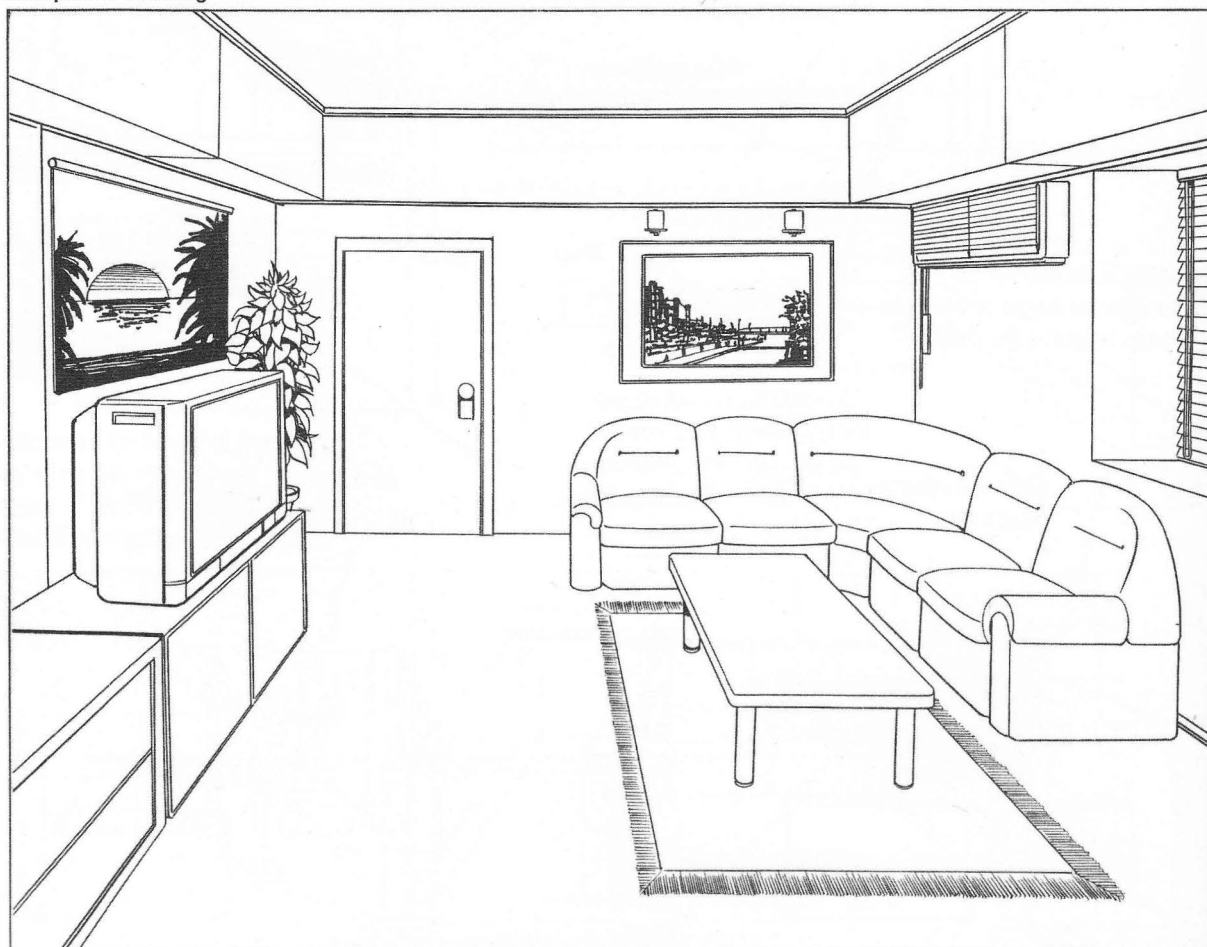
5. Drawing a TV stand

Like the couch and table, start by drawing a projection.

Determine the thickness and width in relation to the couch drawn earlier (they do not have to be as exact as the depth and height).



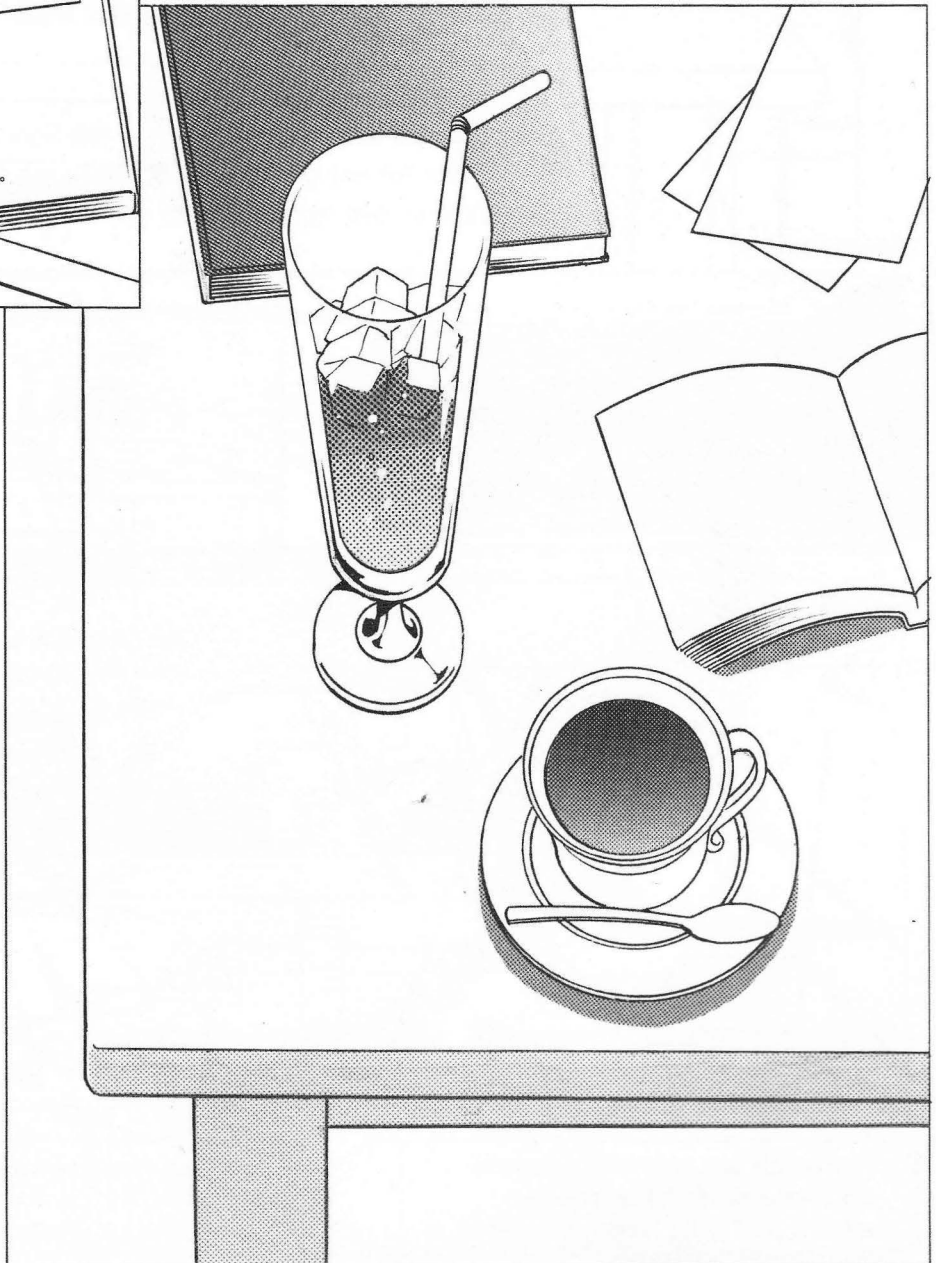
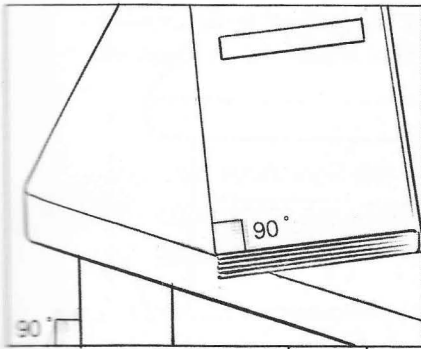
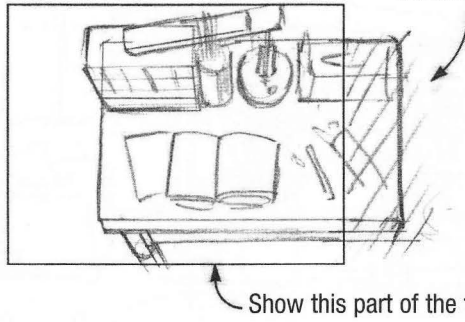
Completed drawing



Drawing Small Indoor Objects

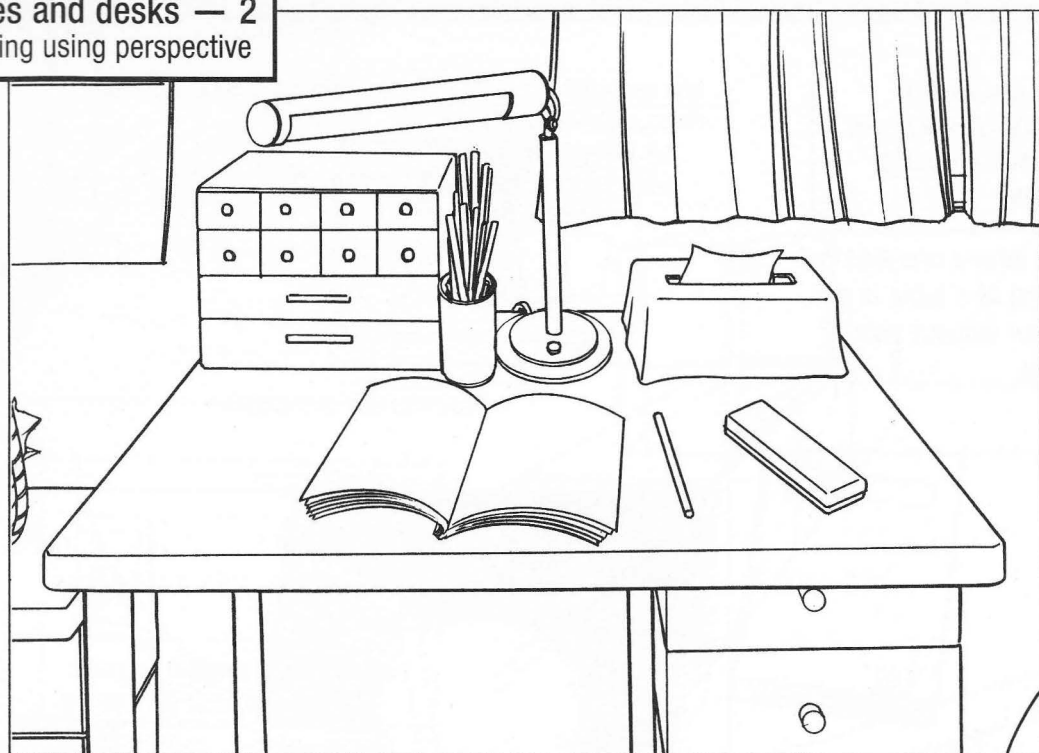
Small objects on tables and desks — 1 Drawing without using perspective

In a scene where one side (or two corners) of a table is not visible, draw without using perspective.



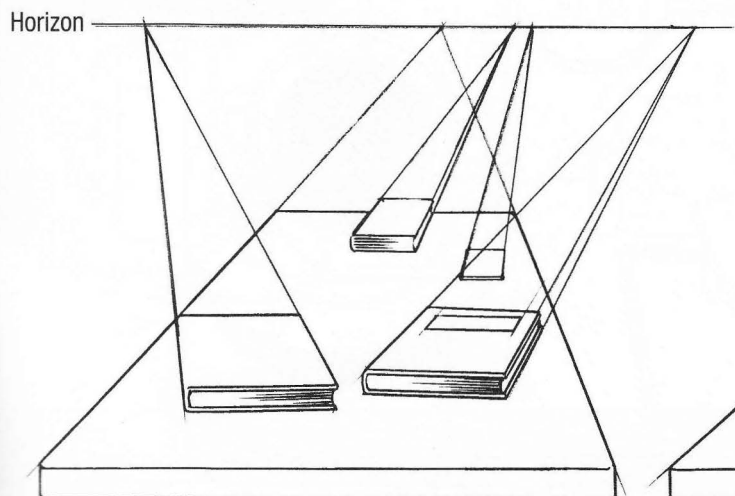
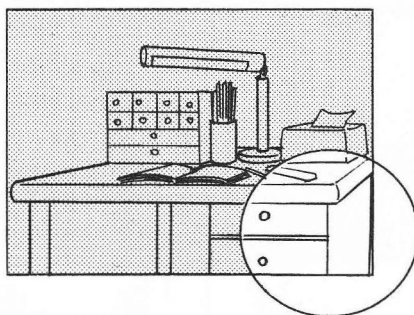
Small objects on tables and desks — 2

Drawing using perspective



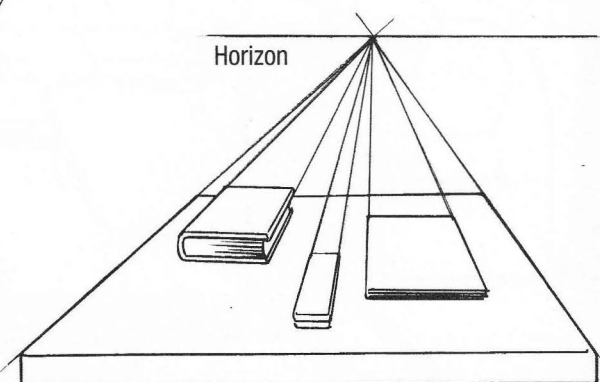
Tables and perspective

- The top of the desk farthest away will look wide if perspective is not used to draw objects on a table when the edges of the table are visible.
- Perspective is not needed when all the edges are not visible.



Small objects on a table drawn using one-point perspective each have their own vanishing point on the horizon line (they all share the same horizon line).

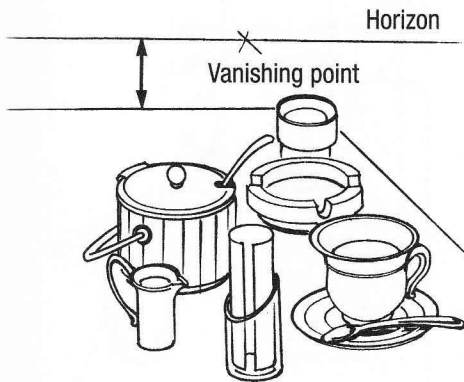
Use perspective for drawing objects when the edges of the table or desk are visible.



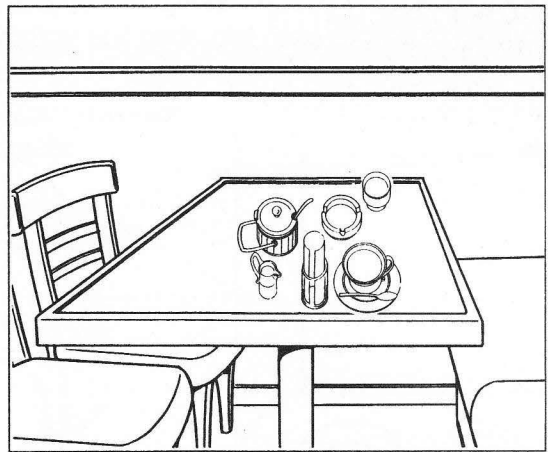
Tables are often drawn using one-point perspective, but objects on a table seldom use the same vanishing point as the table.

How to draw cups

Circles on tables



- When the top of the table and the horizon line are close, use an oval that looks like this.

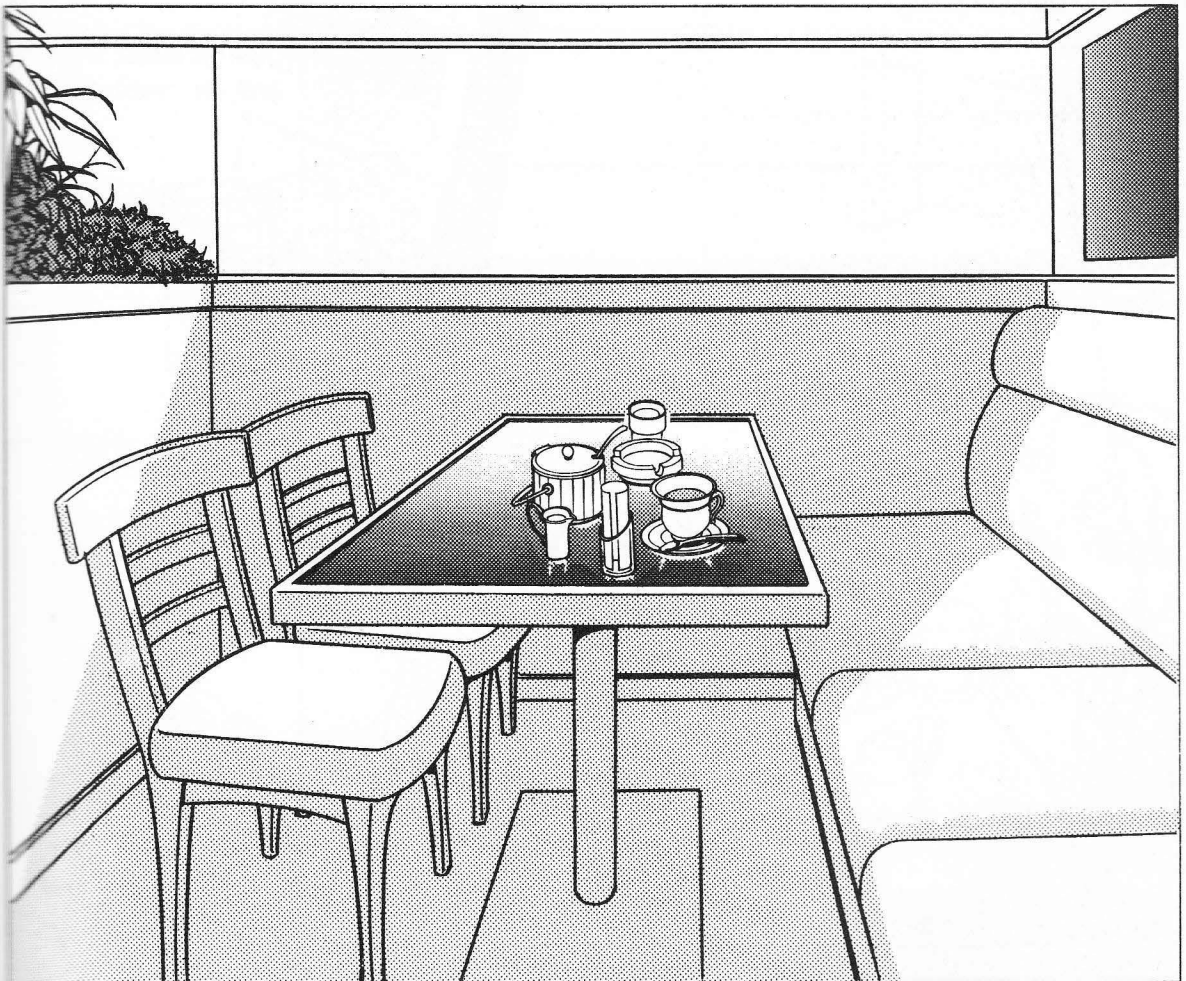


Incorrectly drawn

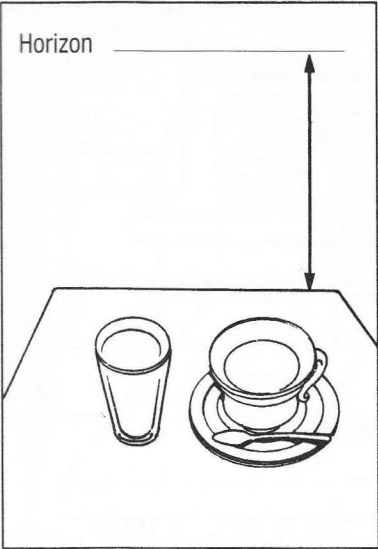
Advice

Thin ovals look like  are often used for long shots. Long shots are used for explanatory scenes with almost the entire body of a character and background.

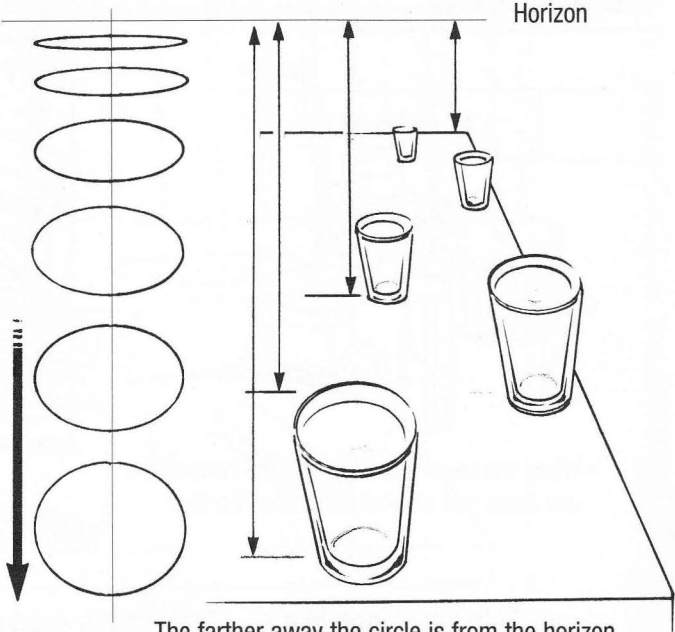
Incorrectly drawn



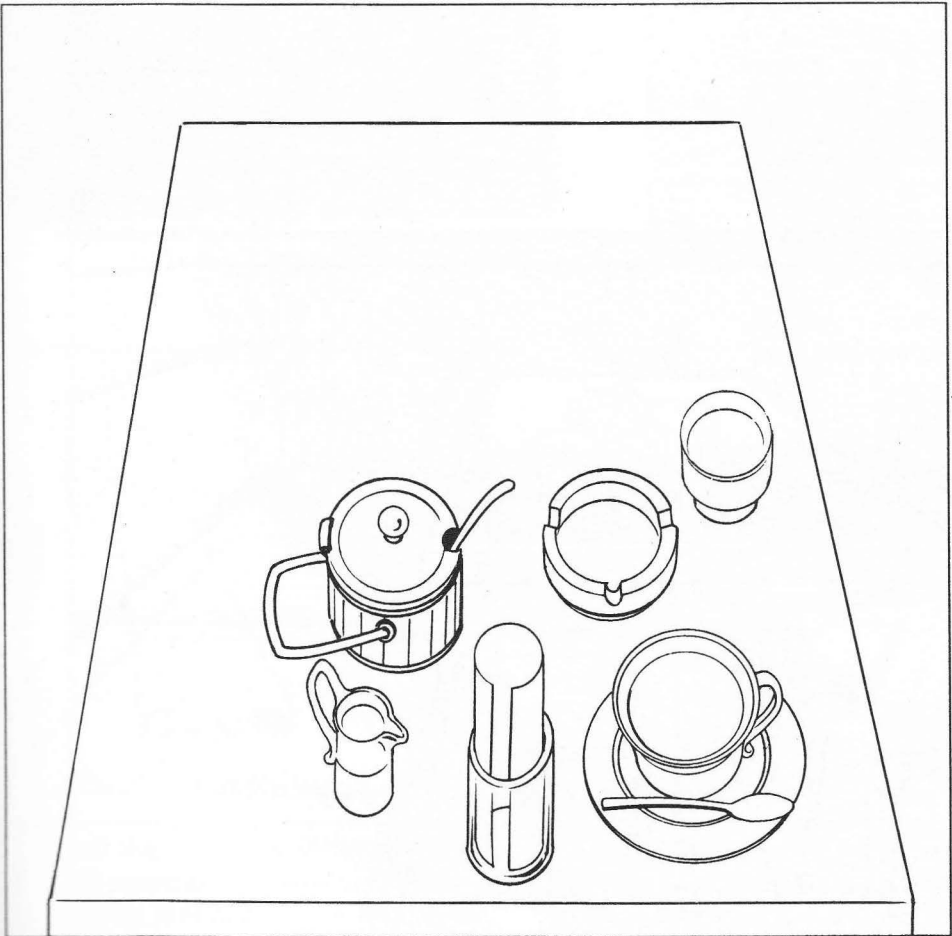
When the top of the table and the horizon line are far apart, use an oval that looks like ○.



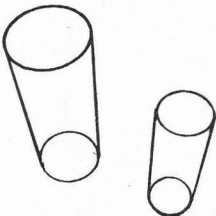
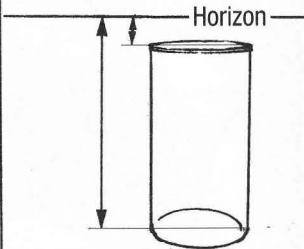
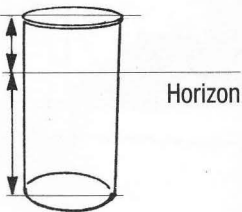
Ovals that are almost circles are often used for close-ups. Close-ups are used when you want to make a strong impression or you want to magnify something.



The farther away the circle is from the horizon line, the closer it becomes to being a perfect circle.



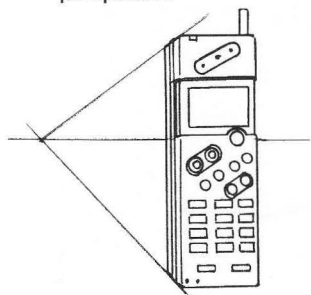
Draw the bottom oval of cans, etc., round.



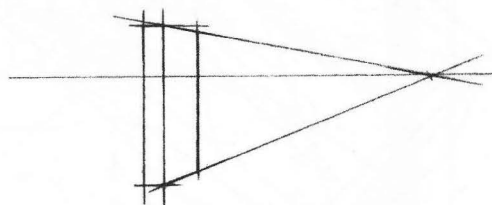
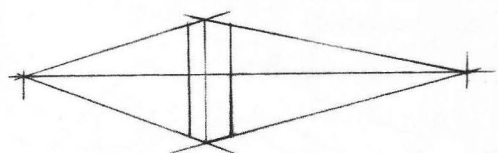
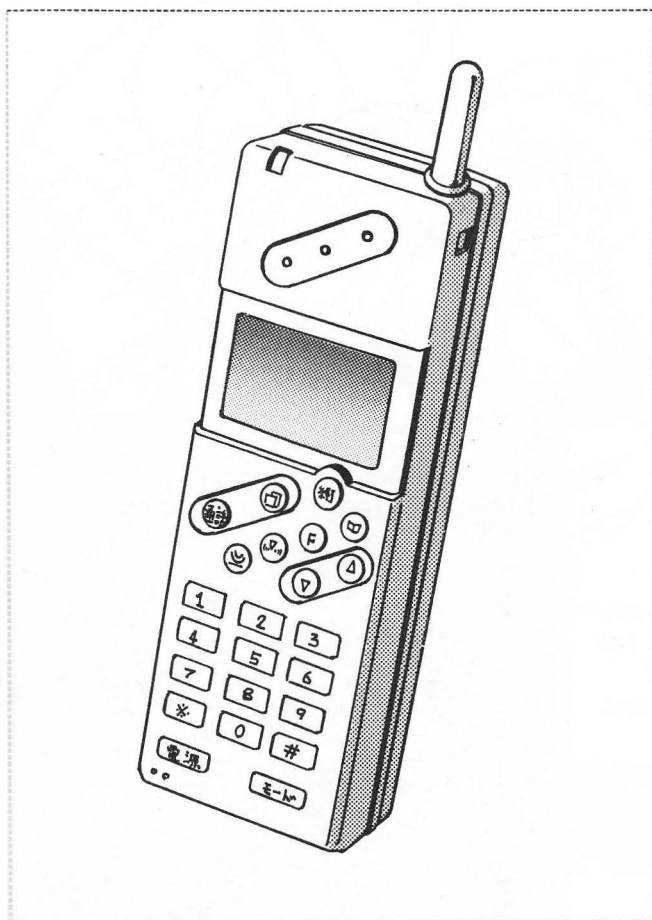
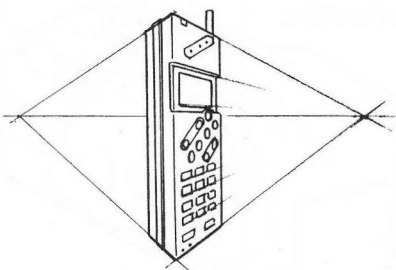
Drawing small objects Using cellular phones as an example

When drawing small objects made up of squares, simply draw all vertical and horizontal lines parallel to each other.

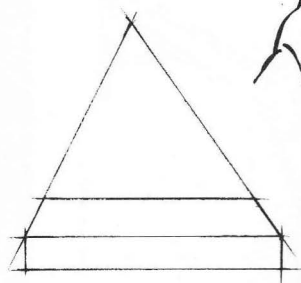
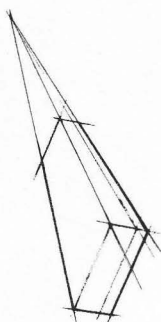
Drawn using one-point perspective



Drawn using two-point perspective



The shapes of small objects will not look good if the vanishing point is not pretty far away.

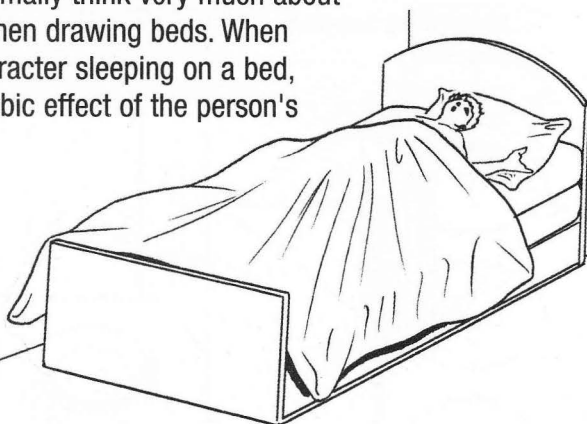


Use one-point perspective when perspective is used from the standpoint of presentation.

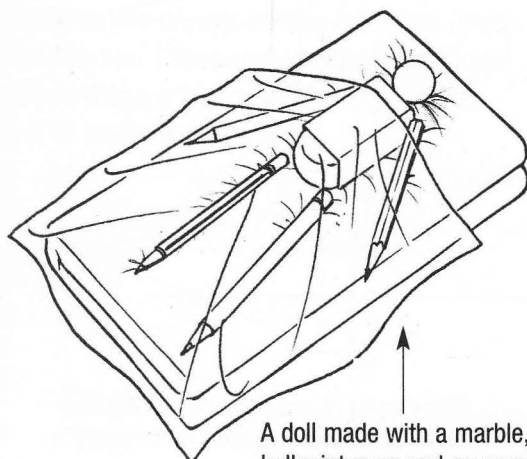


Drawing Beds

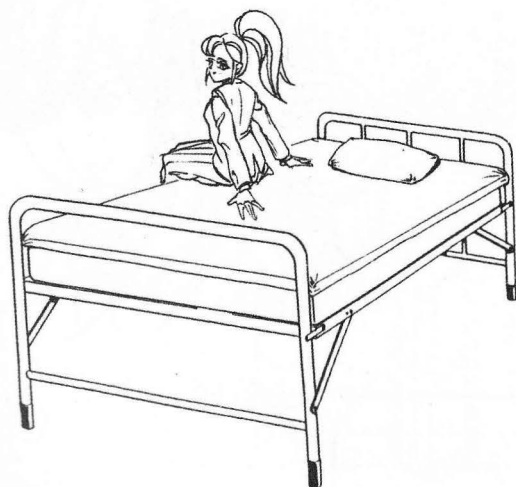
You do not normally think very much about perspective when drawing beds. When drawing a character sleeping on a bed, think of the cubic effect of the person's body.



Build a simple model when it is difficult to come up with the cubic effect of the mattress and person.



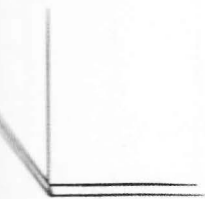
A doll made with a marble, ballpoint pens and an eraser was laid down on a handkerchief mattress. Tissue paper was used for the covers.



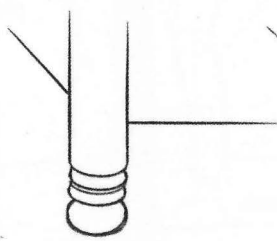
Column: Use perspective when you want to create an impressive effect.



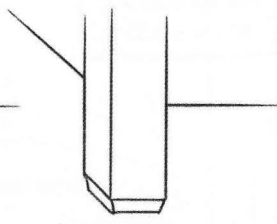
Bed legs



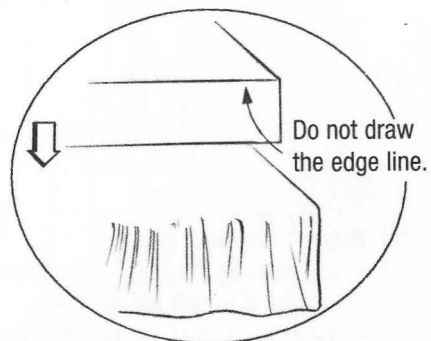
No legs



Round leg



Square leg

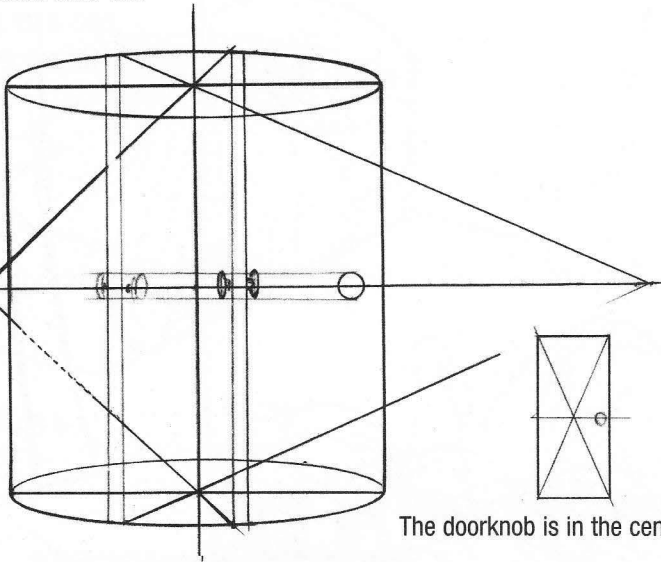
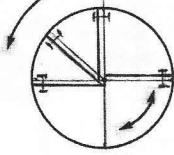


Drawing Doors

When drawing open doors, place separate vanishing points for the frame and the door.

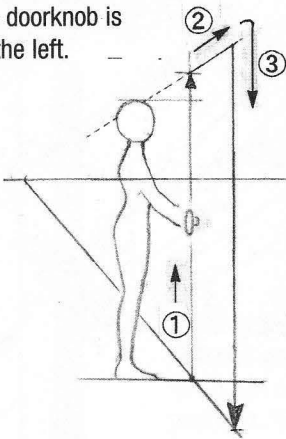
Structure of doors

When viewed from above, draw a circle with the axis as the center.

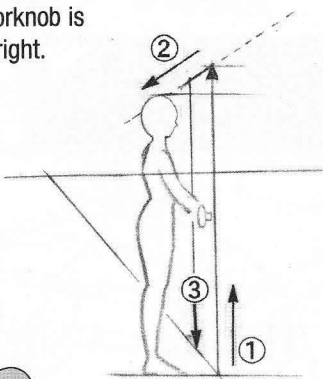


The doorknob is in the center.

The doorknob is on the left.



The doorknob is on the right.



Procedure

1. Draw a character.
2. Draw a dot about one head length to the side of the character's feet.
3. The floor line is formed by connecting the dot and the vanishing point. (You get a character standing near a door.)
4. Slide the character and determine the height of the door from the height of the character.
5. Determine the height of the ceiling from the height of the door.
6. Draw the ceiling line from the vanishing point.
7. Determine the width of the door last.

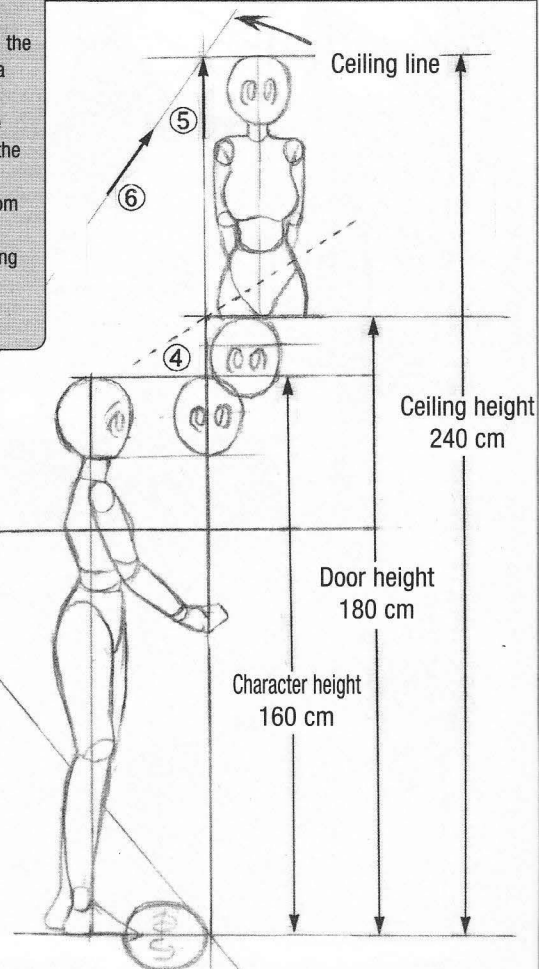
240 cm = 7.87 ft.
180 cm = 5.90 ft.
160 cm = 5.25 ft.
80 cm = 2.63 ft.

Point

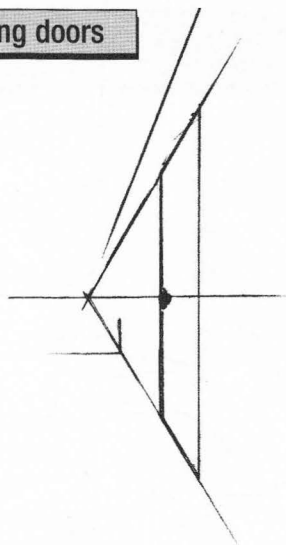
Determining door width

- Start drawing the width of the door from the side with the doorknob.
- Make the width of a door drawn in perspective slightly narrow.

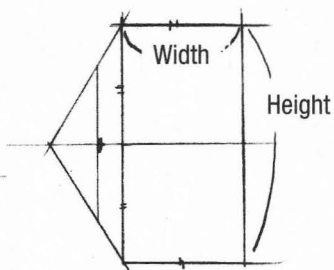
Column: Make the distance between the top of the door and the ceiling about 80 cm, which is about half the height of the character.



Opening doors

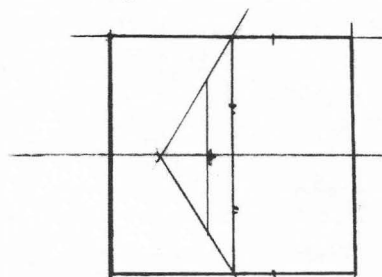


① Draw the door as seen from straight on.



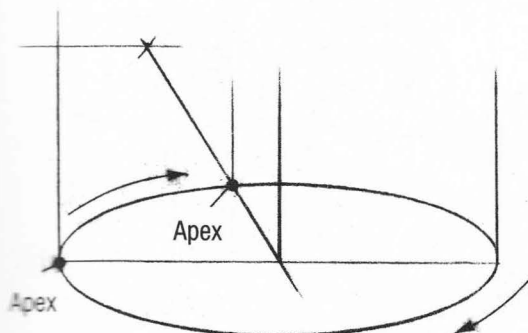
Make the width half the length of the height and draw the door as seen from straight on.

② Draw the door open at 180° angle.



No matter what the perspective of the door you want to draw is, make it look like this when you draw an open door.

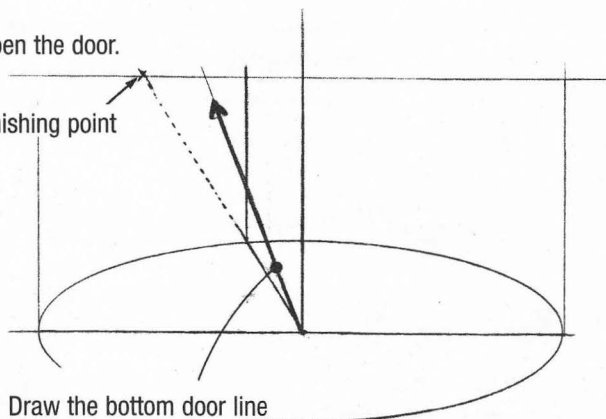
③ Draw an oval (locus of door).



Draw an oval that passes through the apexes representing the corner of the door. (The oval path the door travels when opened.)

④ Open the door.

Door vanishing point



Draw the bottom door line indicating how far the door is open.

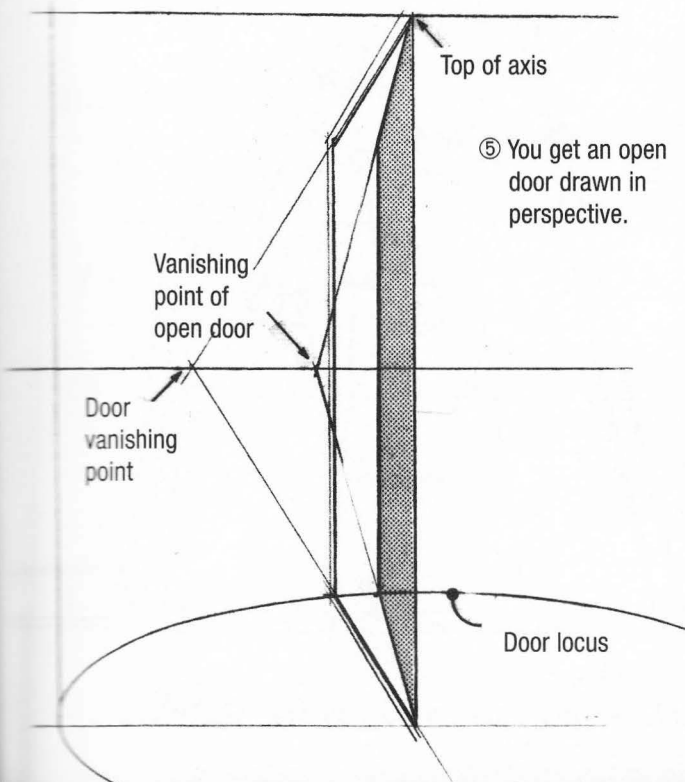
Top of axis

⑤ You get an open door drawn in perspective.

Vanishing point of open door

Door vanishing point

Door locus



Examples of open doors

Door vanishing point

Horizon

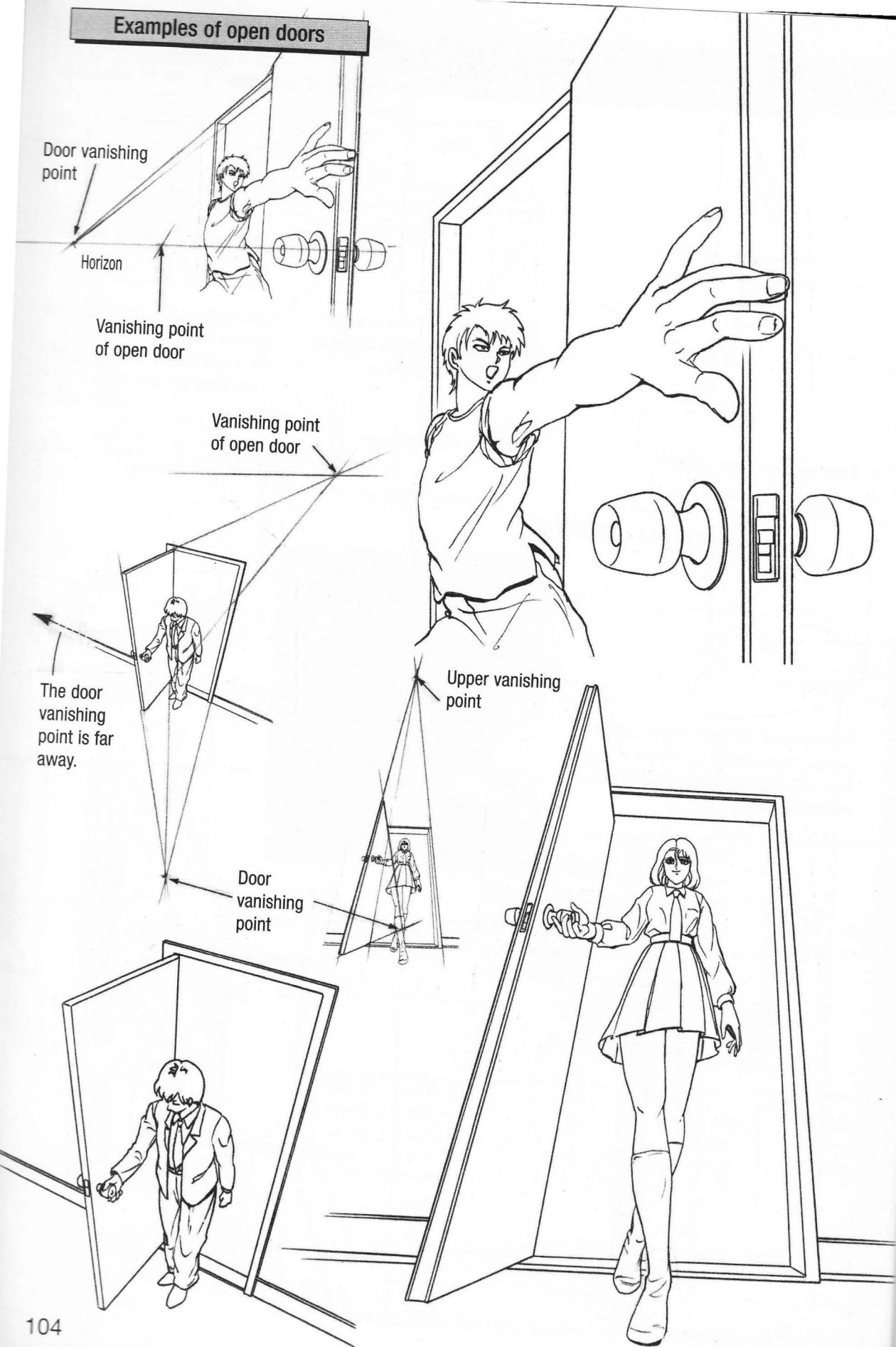
Vanishing point of open door

Vanishing point of open door

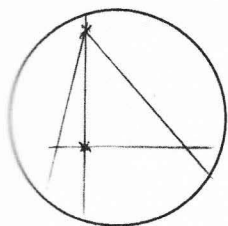
The door vanishing point is far away.

Door vanishing point

Upper vanishing point

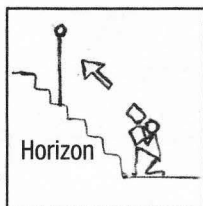


Drawing Stairs



Move the vanishing point to the left when you want to make it look like you are looking up from the left.

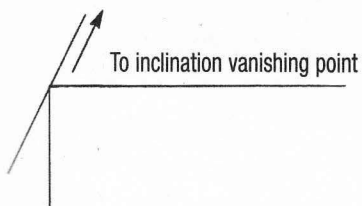
Vanishing point for determining inclination of stairs



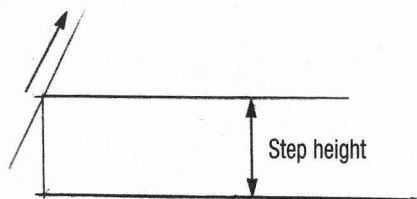
Normal
vanishing
point



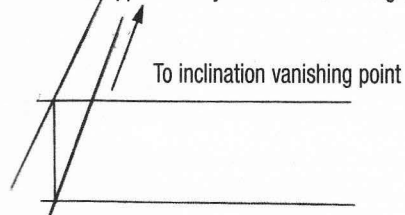
- ① Draw supplementary line for inclination.



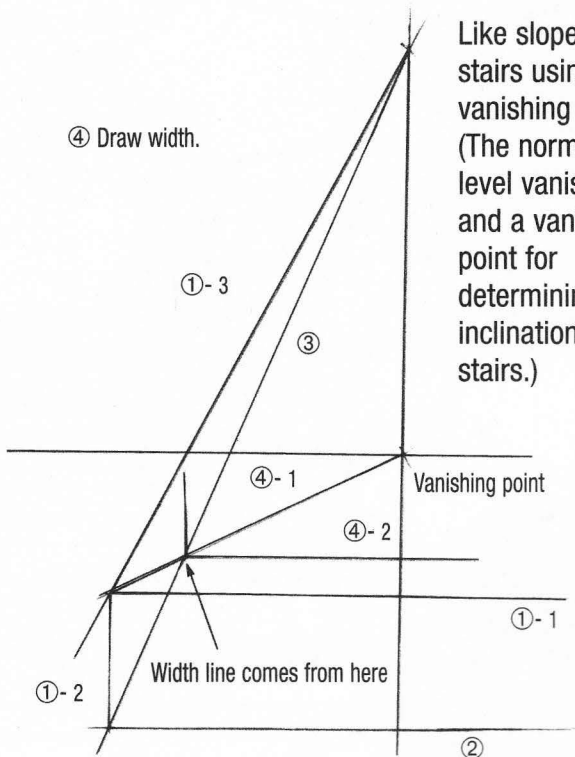
- ② Determine step height.



- ③ Draw a supplementary line for determining step width.



- ④ Draw width.

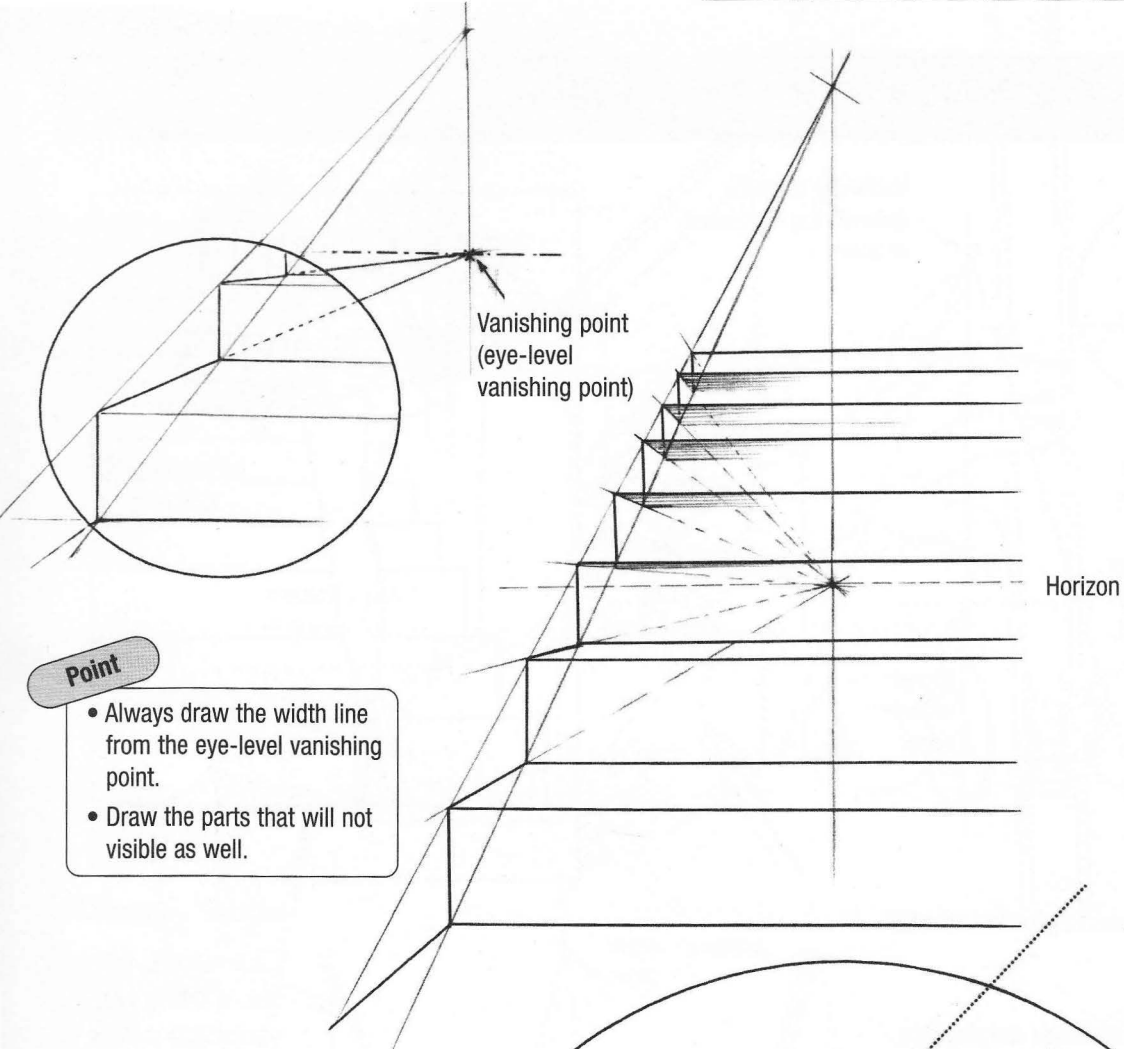


Inclination vanishing point

Like slopes, draw stairs using two vanishing points. (The normal eye-level vanishing point and a vanishing point for determining the inclination of the stairs.)

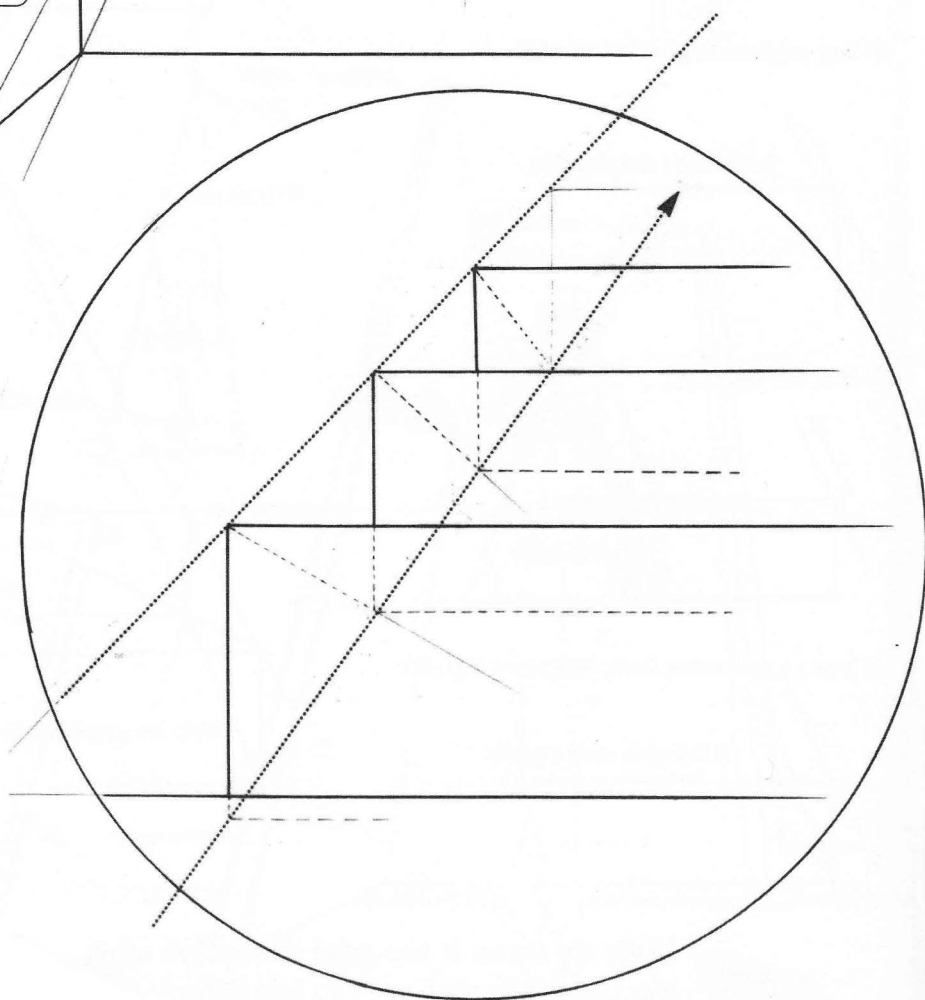
Advice

Stairs are drawn in one-point perspective using two vanishing points and two supplementary lines.



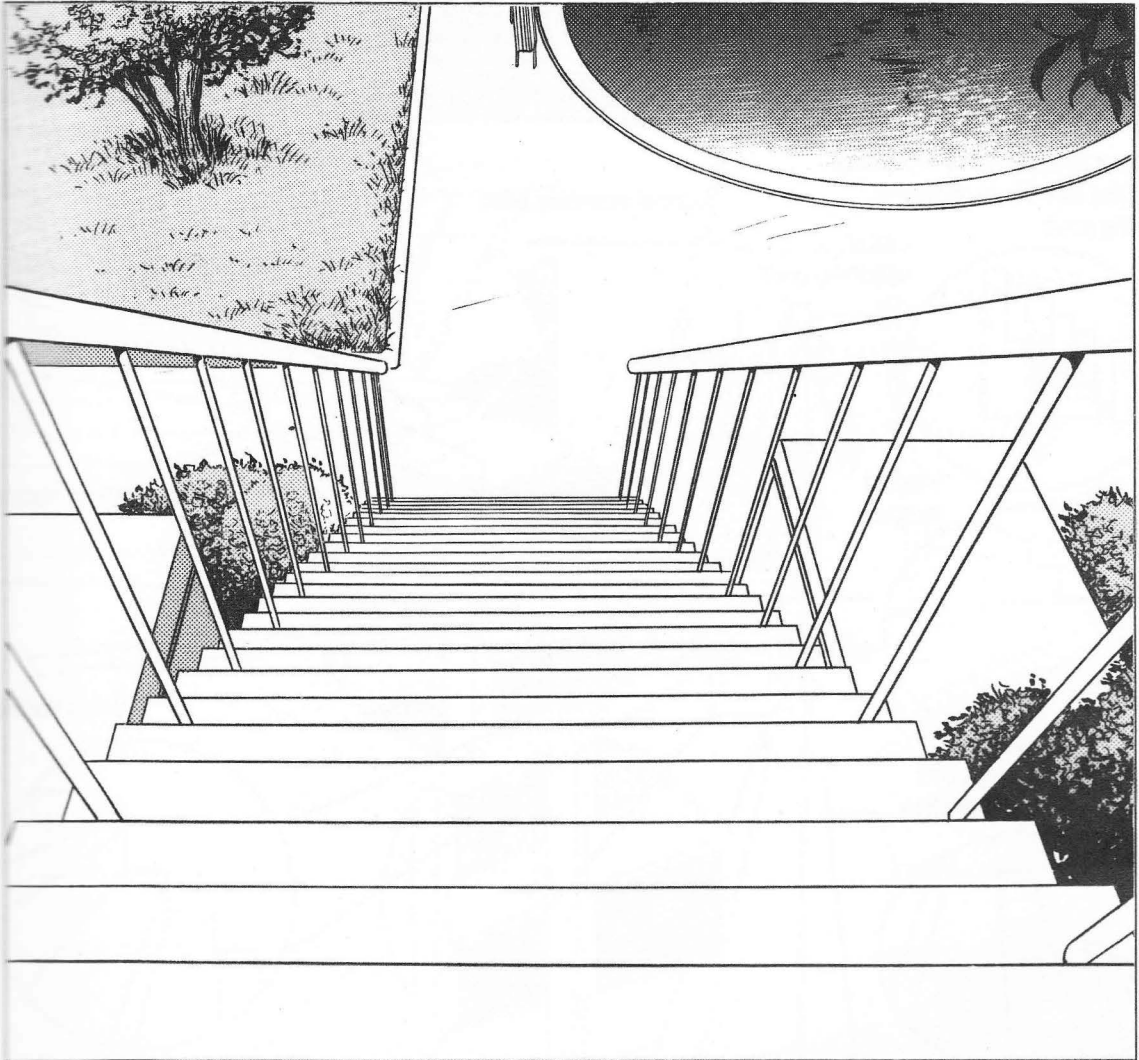
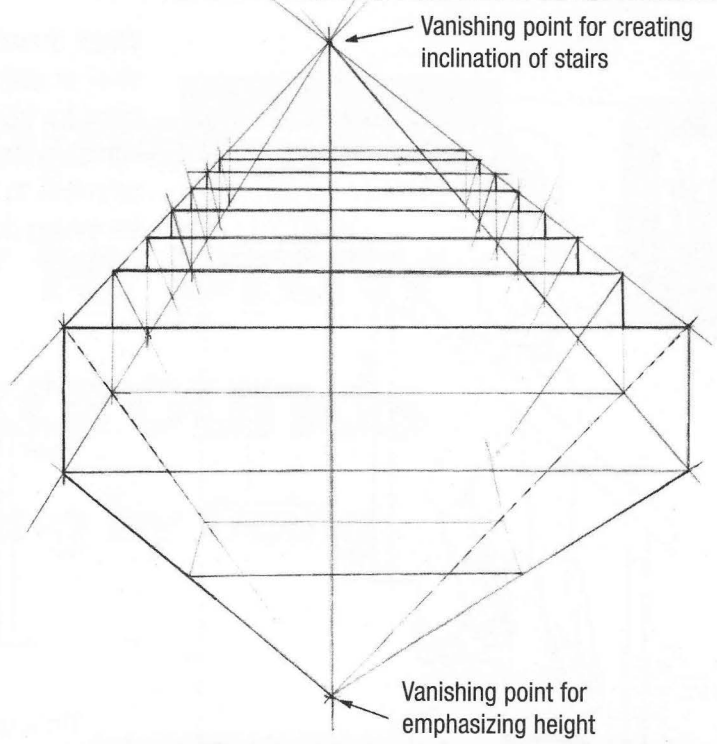
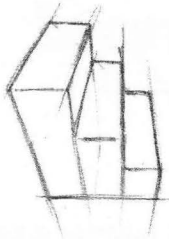
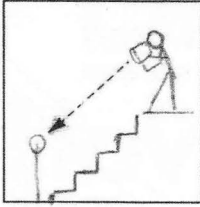
Point

- Always draw the width line from the eye-level vanishing point.
- Draw the parts that will not visible as well.

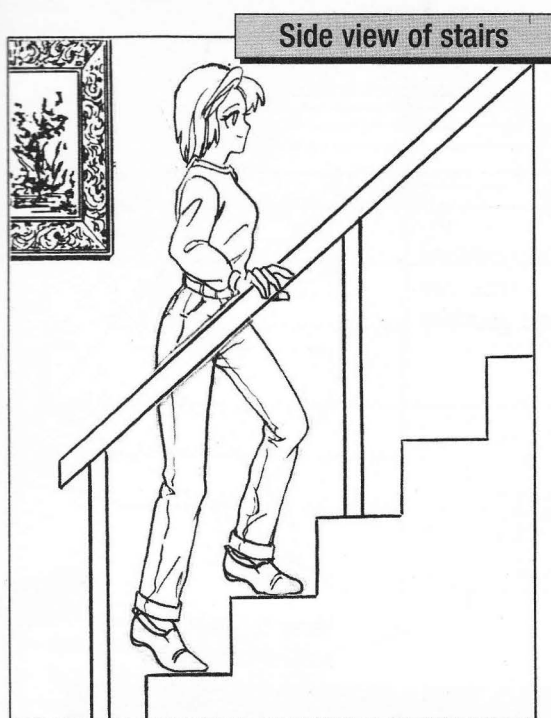


Looking down a flight of stairs

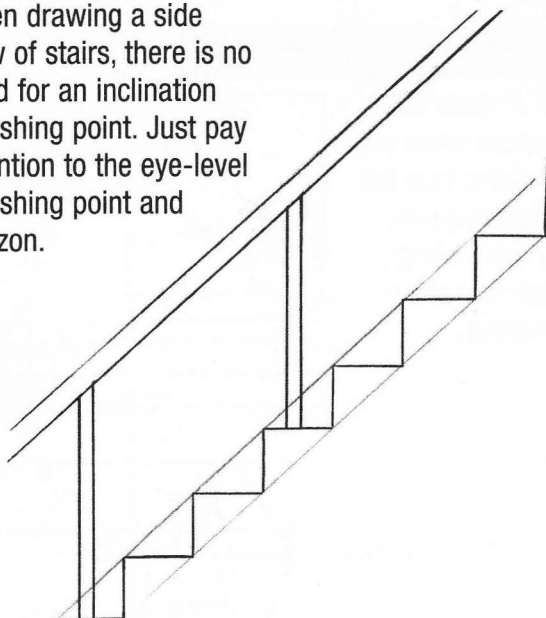
Think of there being no horizon when you draw stairs from the top looking down. Draw them using vertical two-point perspective.



Column: You cannot see the horizon in a picture looking down a flight of stairs because of the composition of the picture.



When drawing a side view of stairs, there is no need for an inclination vanishing point. Just pay attention to the eye-level vanishing point and horizon.



The angle of inclination of the handrail and that of the stairs are the same.

Distinguishing features of stairs: Viewing location and appearance

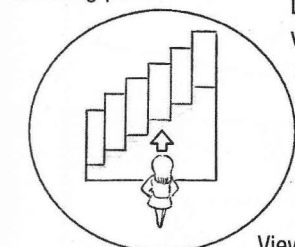
Difference in appearance depending on viewing location in relation to vanishing point

Right of vanishing point

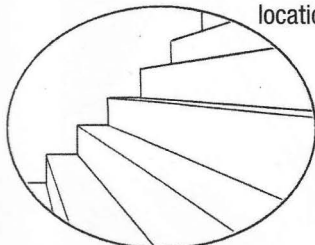
Left of vanishing point

Vanishing point

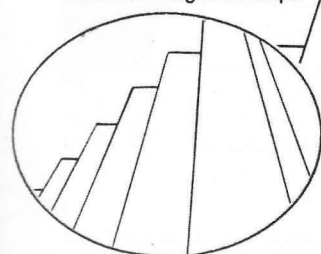
Difference in appearance depending on viewing location in relation to horizon



Viewing location



Right of vanishing point
• Can see height of steps

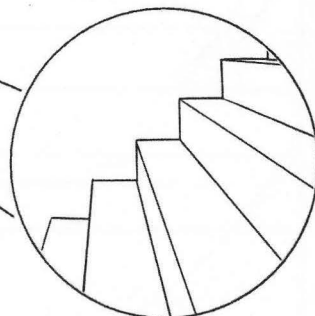


Left of vanishing point
• Can see width of steps

Above horizon
• Cannot see upper surface
Horizon

Above horizon

Below horizon

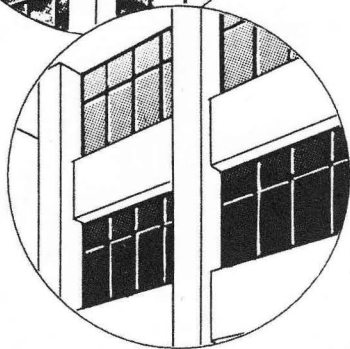
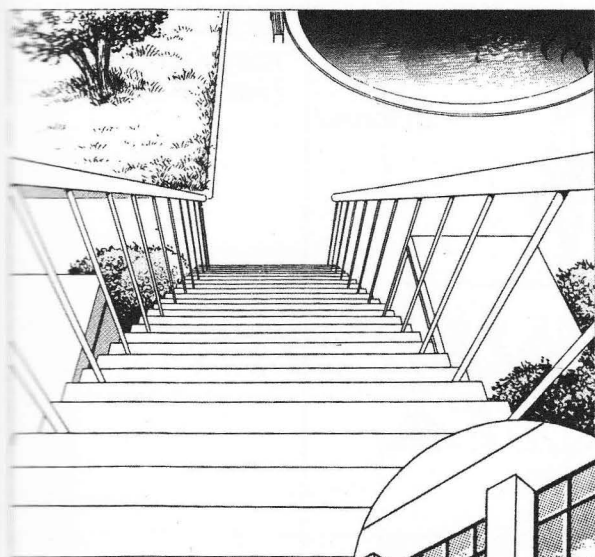


Below horizon
• Can see upper surface

Chapter 5

How to Draw Backgrounds

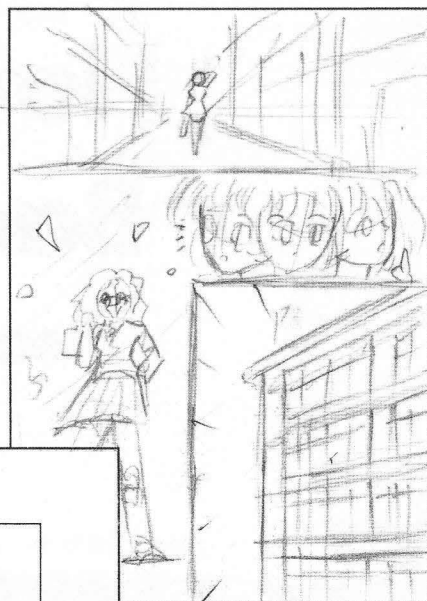
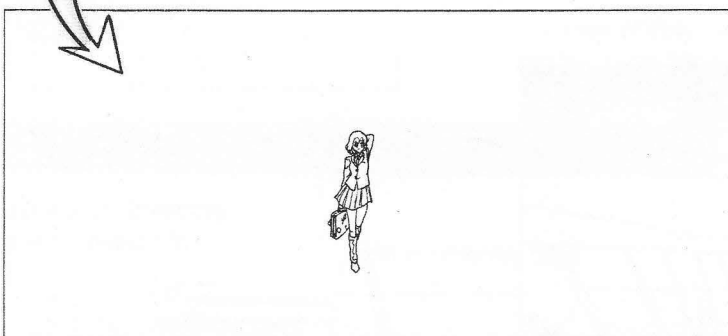
Learning by Doing



Process of Drawing Manga Backgrounds

Let's say you have a name and a character for your manga.
All that is left to do is draw the backgrounds.
Let's take a look at the actual process of drawing manga
backgrounds using perspective.

Draw town scene here
(residential area).



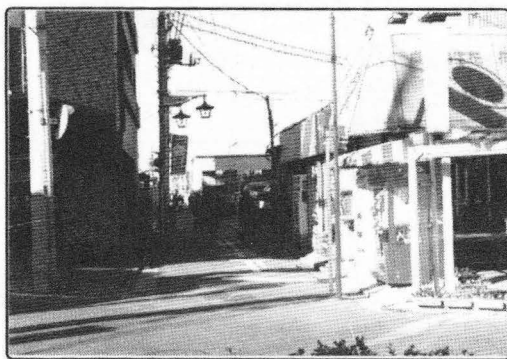
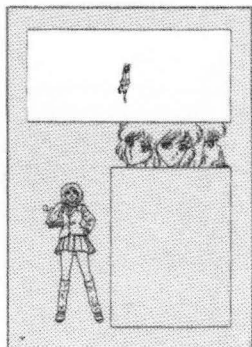
Proposal draft
(*'neemu'* in Japanese)



Draw school here.

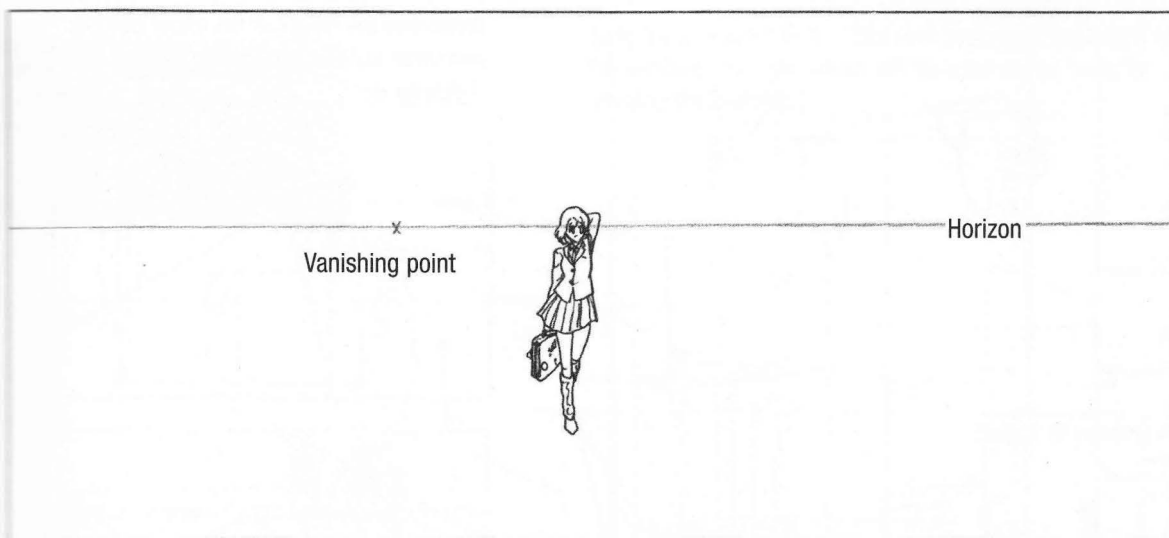
1 Drawing a residential area

In the case of manga, you usually draw the frame at the upper left or the top row first. This helps keep the page from getting messy.

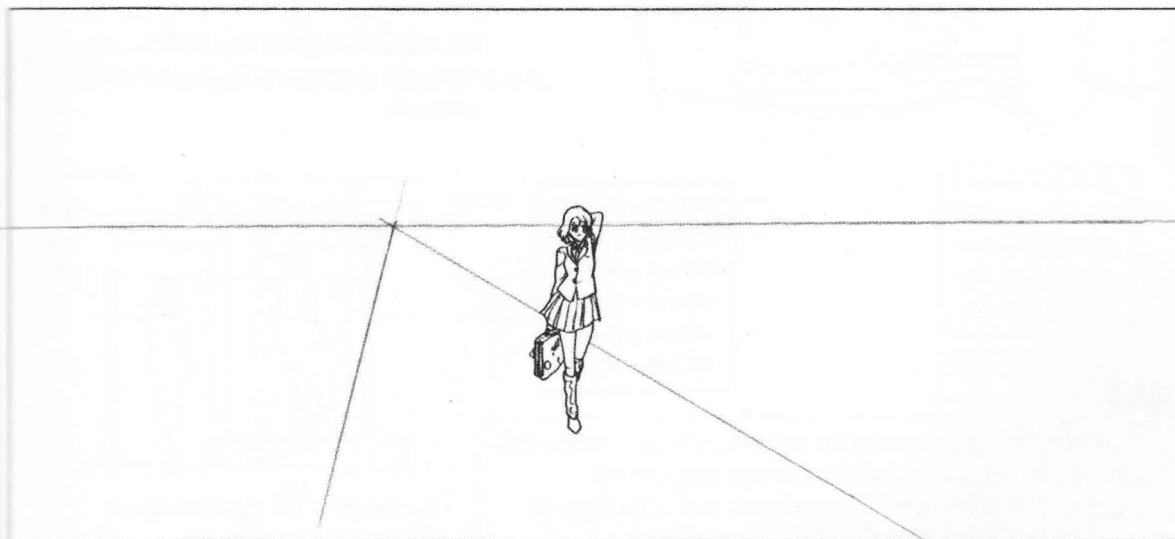


Reference photograph

① Determine horizon and vanishing point.

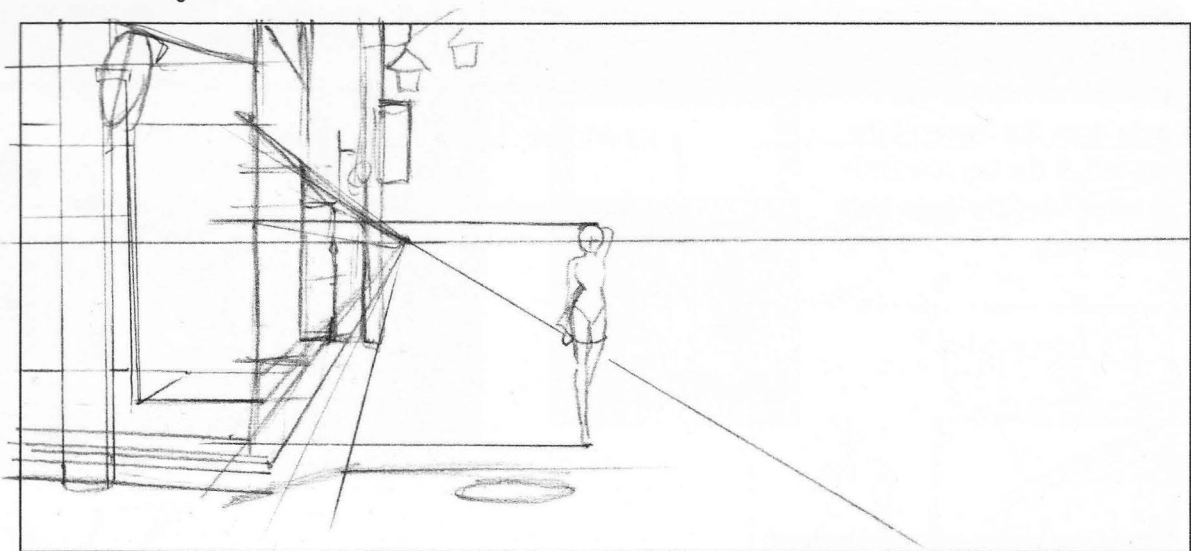


② Draw road.

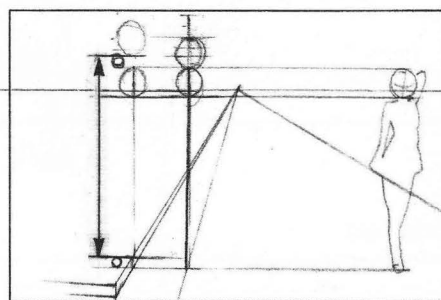
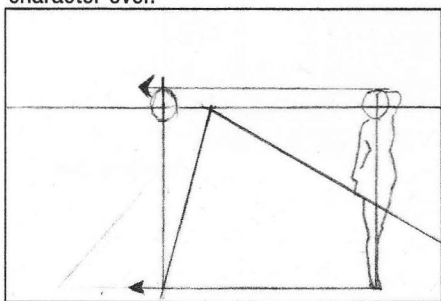


Column: When drawing, mask the frames you are not working on with paper to keep them as clean as possible.

③ Draw buildings on the left.



Determine the height of the show window and other buildings by sliding the character over.

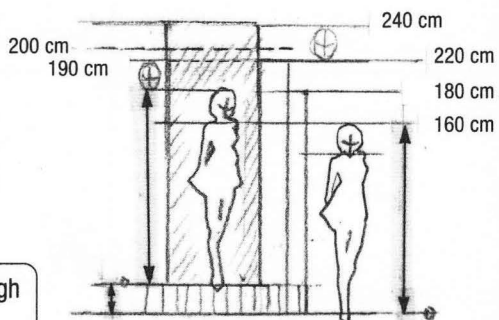


Raise the character to the level of the sidewalk.

240 cm = 7.87 ft.
220 cm = 7.22 ft.
200 cm = 6.56 ft.
190 cm = 6.23 ft.
180 cm = 5.90 ft.
160 cm = 5.25 ft.

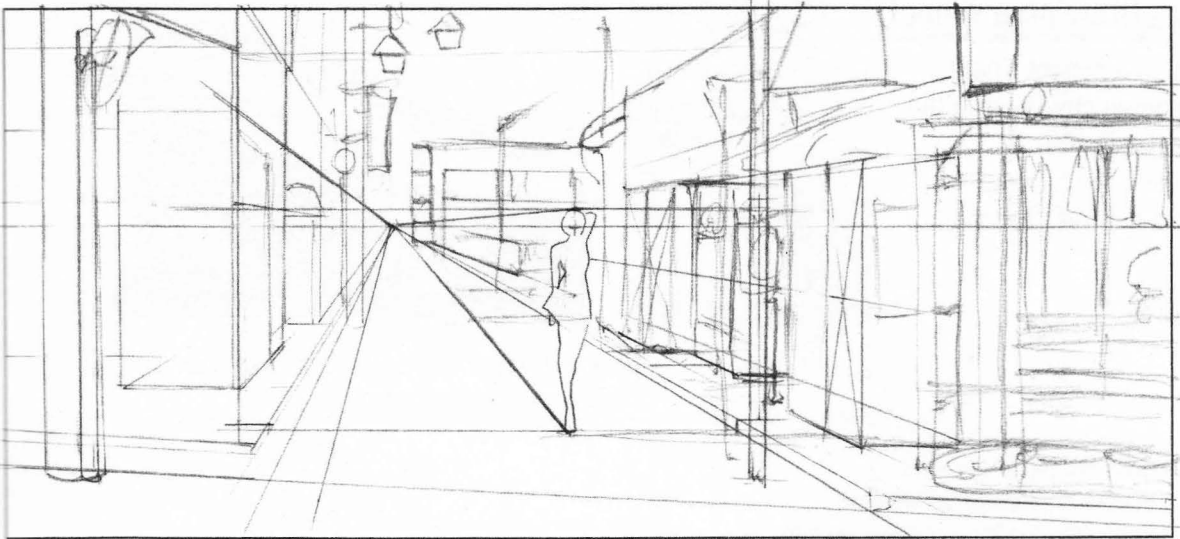
Point

Think of the street entrance of the building as being 2 meters high and the show window as being 2.4 meters high. Use the character as a guide when determining the size of the building, i.e., the height of the character plus number of heads.



The height of the show window is between 200 and 240 cm

④ Draw buildings on the right



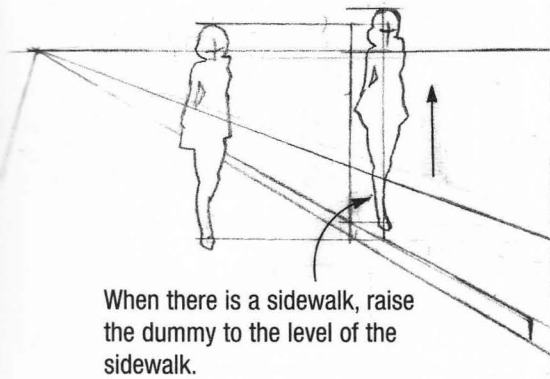
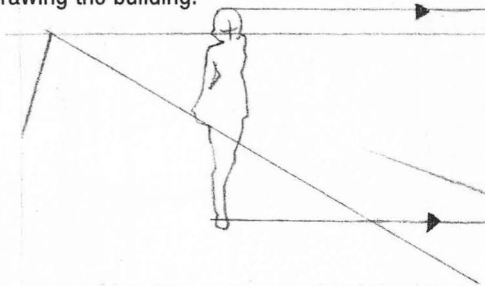
Standard character sizes

Adult males: 175 cm

Adult females: 160 cm

Children: About half the size of adults (80 - 100 cm)

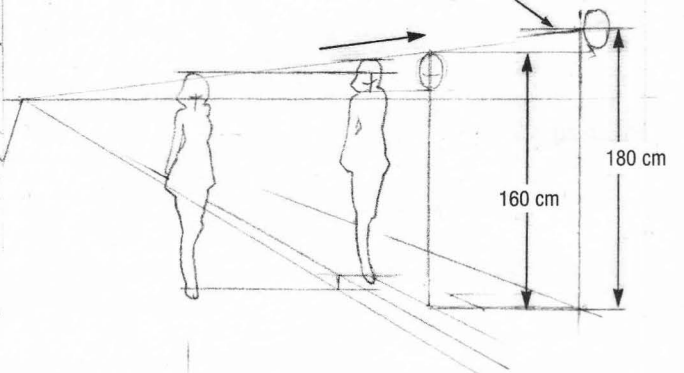
Slide the character to the right and determine the height of the vending machine, which will be used as the basis for drawing the building.



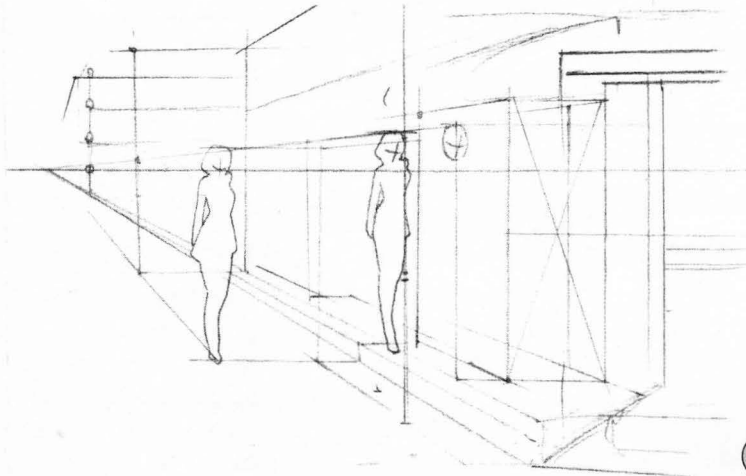
Advice

When drawing backgrounds, characters act as a kind of scale.

Height of vending machine

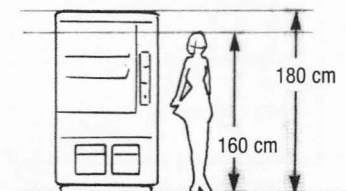


180 cm	= 5.90 ft.
175 cm	= 5.74 ft.
160 cm	= 5.25 ft.
100 cm	= 3.28 ft.
80 cm	= 2.63 ft.



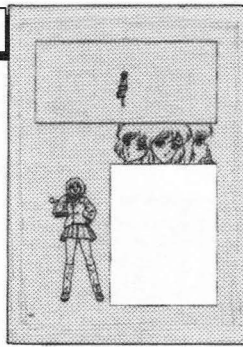
Point

Comparison of character and vending machine



2 Drawing a school

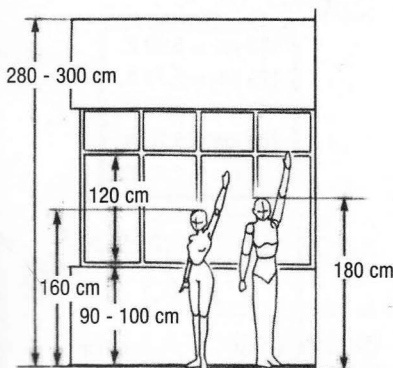
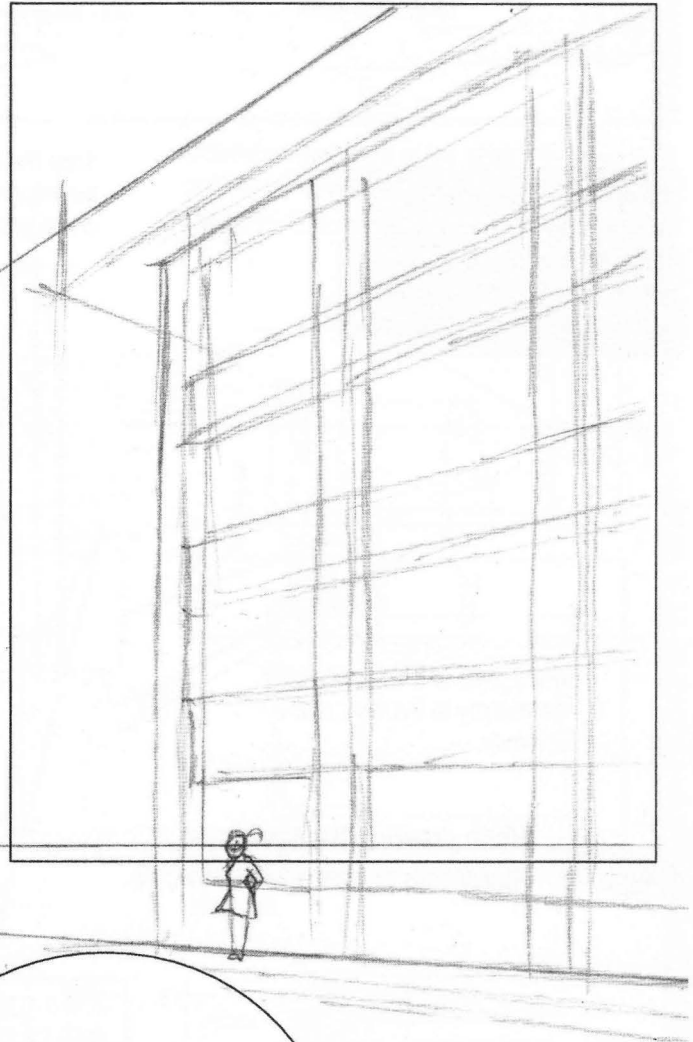
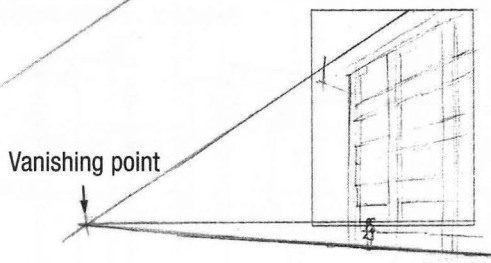
Next is a school. There will be no character in the scene, but start by drawing the foundation and a dummy character.



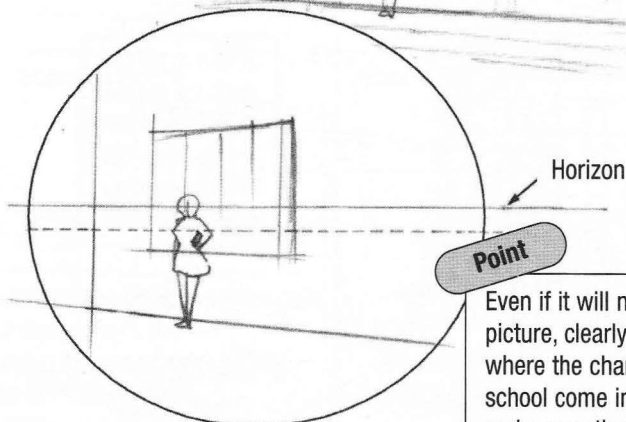
- ① Draw a character next to the school and determine the horizon and vanishing point.

- ①-1 Draw horizon at eye level (middle of ground-floor window).
 ①-2 Extend sloping line in rough sketch to get vanishing point (point of intersection with horizon line).

300 cm	= 9.84 ft.
280 cm	= 9.19 ft.
180 cm	= 5.90 ft.
160 cm	= 5.25 ft.
120 cm	= 3.94 ft.
100 cm	= 3.28 ft.
90 cm	= 2.95 ft.

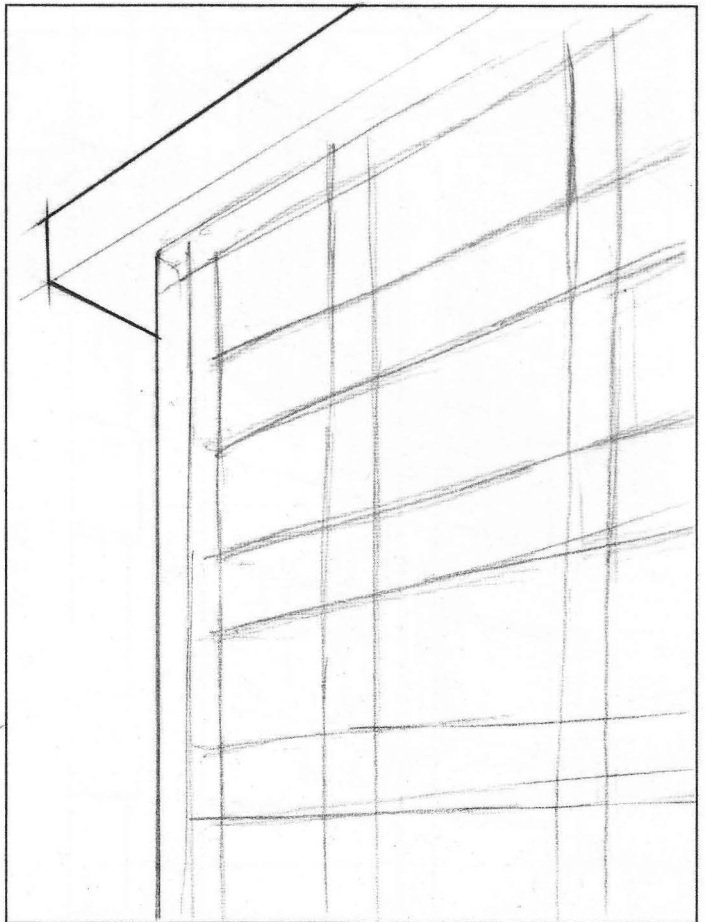


Comparison of ground floor and characters

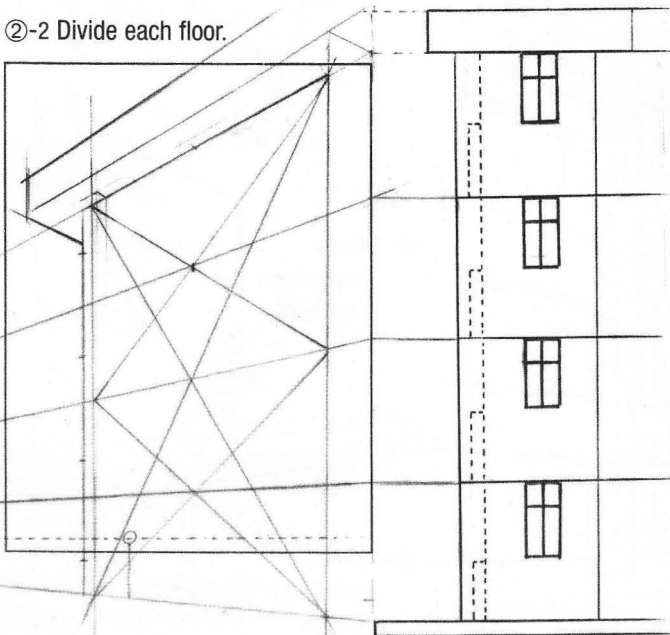


Even if it will not appear in the picture, clearly draw the surface where the character and the school come into contact to make sure they are balanced correctly.

② Draw contour



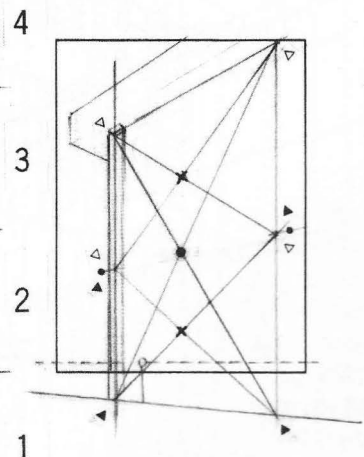
②-2 Divide each floor.



The eaves, window and wall ratios of schools and other buildings are the same for each floor.

Side view

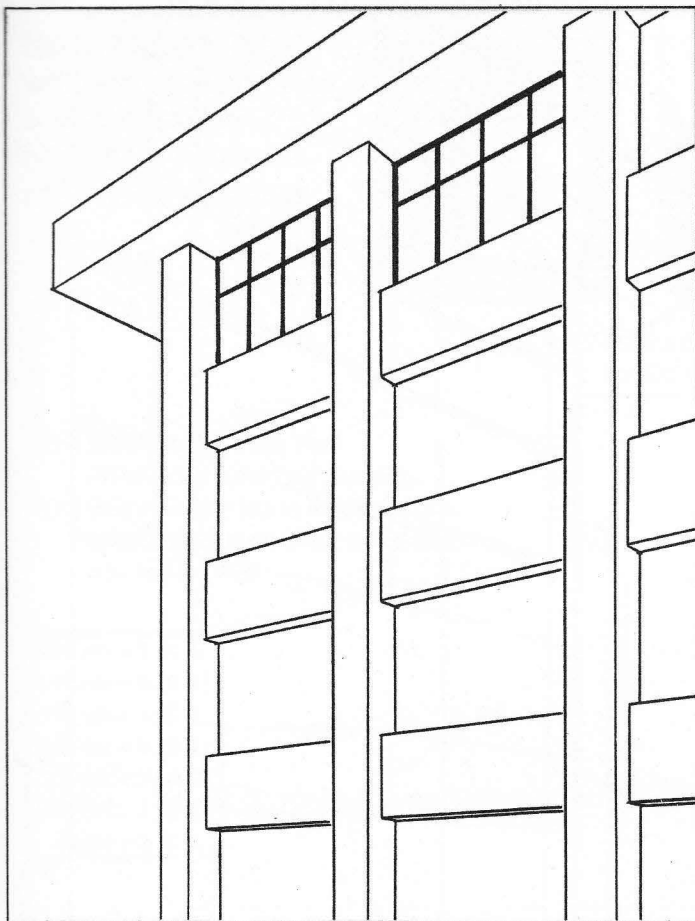
②-1 Determine each floor by dividing into four parts.



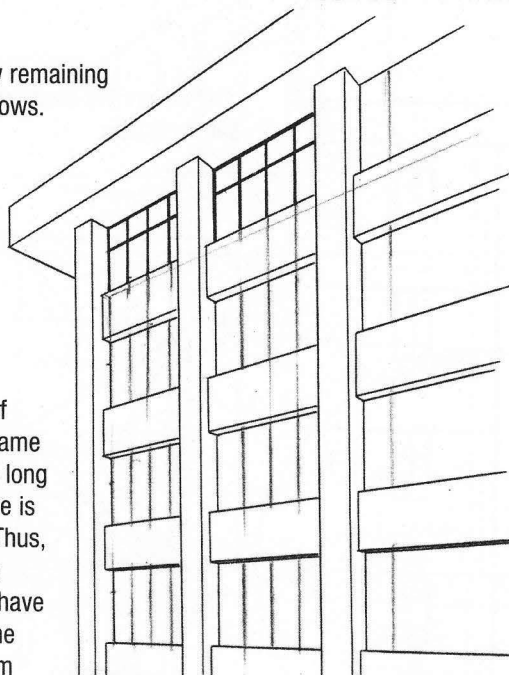
Point

Divide into four parts starting from the first-floor contact surface that is not visible.

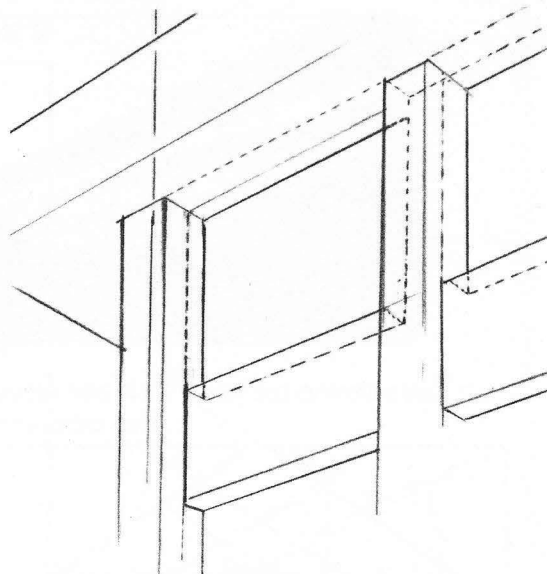
③ Draw windows.



Draw remaining windows.

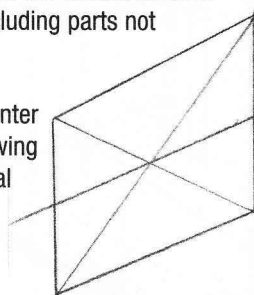


The depth ratio of windows is the same for every floor as long as the perspective is not from above. Thus, for the remaining windows all you have to do is extend the window lines from another floor.

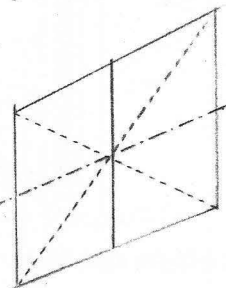


Clearly draw the overall window border (including parts not visible).

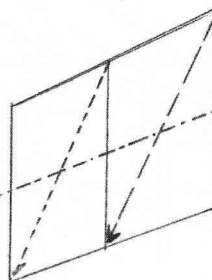
③-1 Find center by drawing diagonal lines.



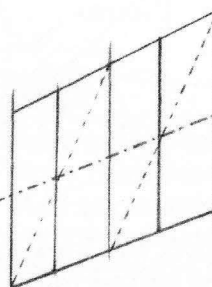
③-2 Divide into two parts.



③-3 Draw supplementary lines.



③-4 Divide each into two (to divide window into four).

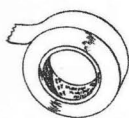




Do not bring background lines into contact with characters.

Advice

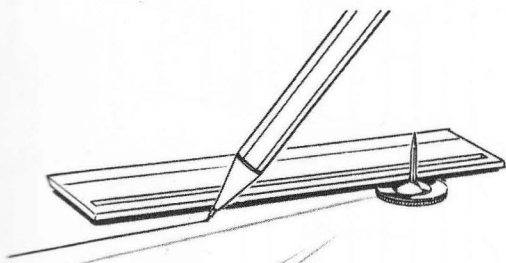
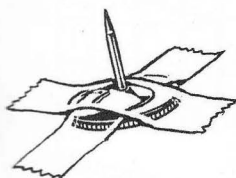
Tape a thumbtack over the vanishing point.



Masking tape

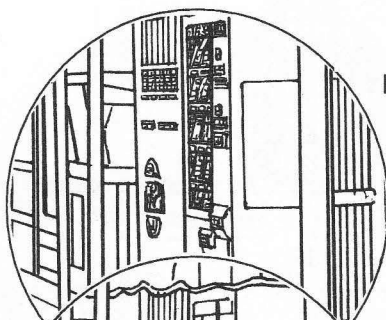


Thumbtack

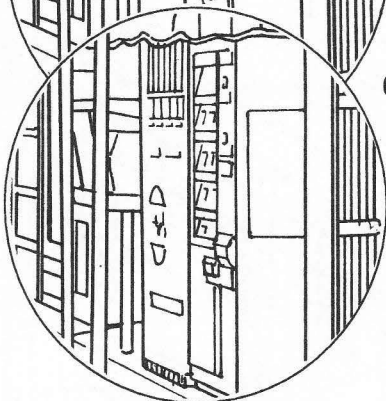


When drawing lines in the direction of the vanishing point, tape a thumbtack over the vanishing point. Using a ruler with the thumbtack as the axis makes it easier to draw both rough sketches and in pen.



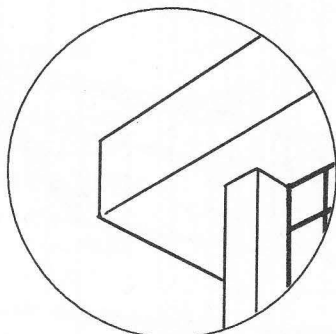


Incorrect



Correct

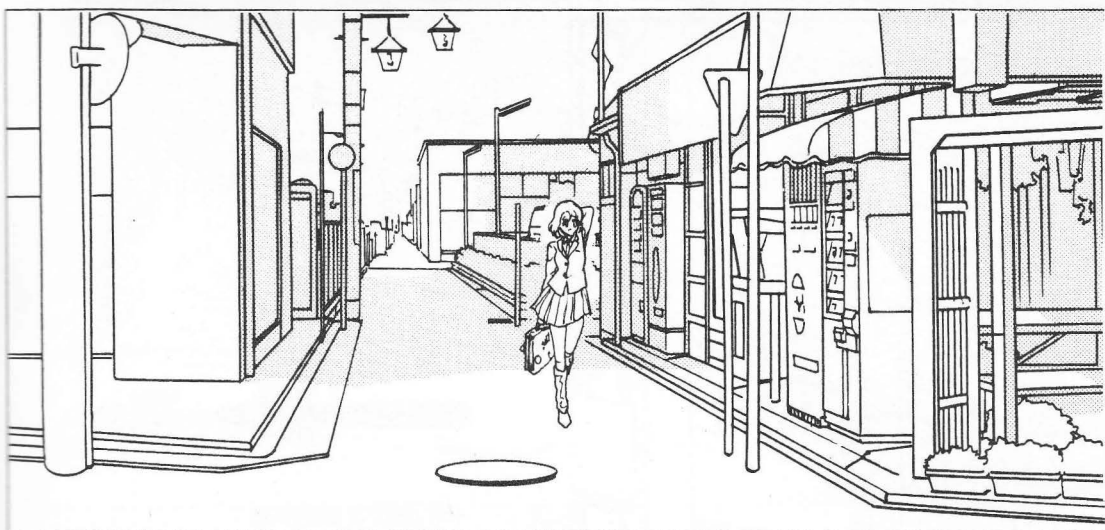
Omit intricate parts. Represent them by making use of shadows.



Not joining the edge line to the corner better creates the mood of a building.



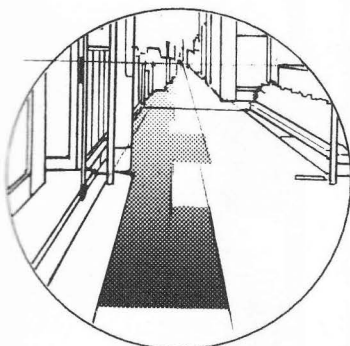
5 Adding tone 1 — Residential area



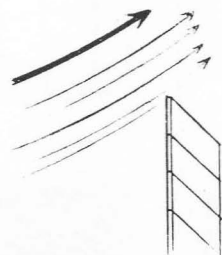
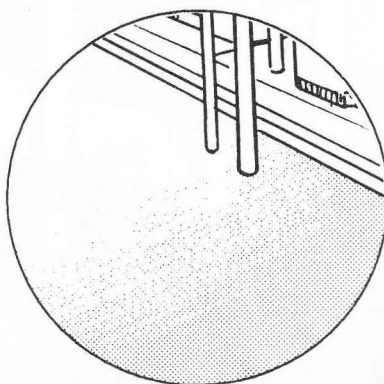
Soft touch: Use little tone.



Hard touch: Apply tone discriminatingly.



Think of perspective when determining tone cut.



Scrape uniform curve using blade tip of cutter.

6 Adding tone 2 — Residential area

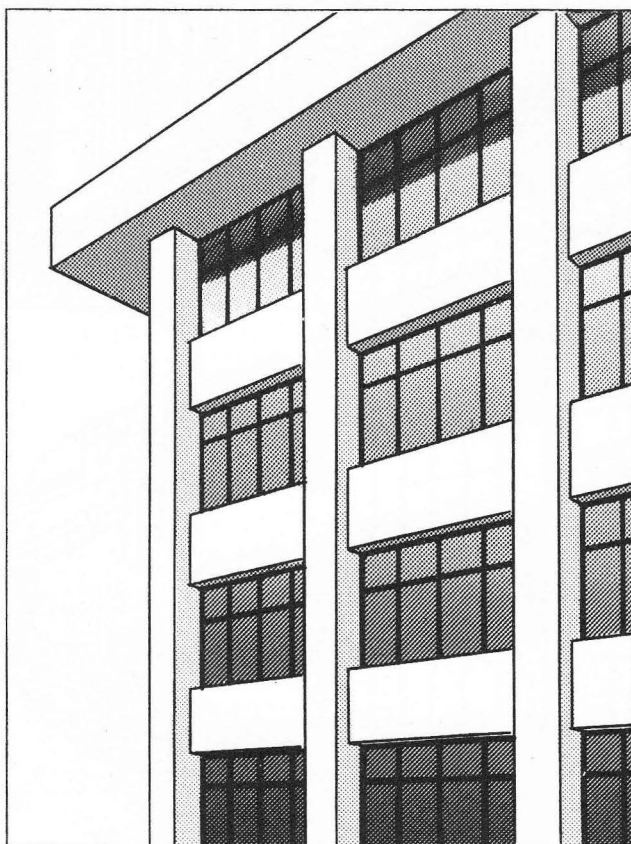


Soft touch: Use little tone.

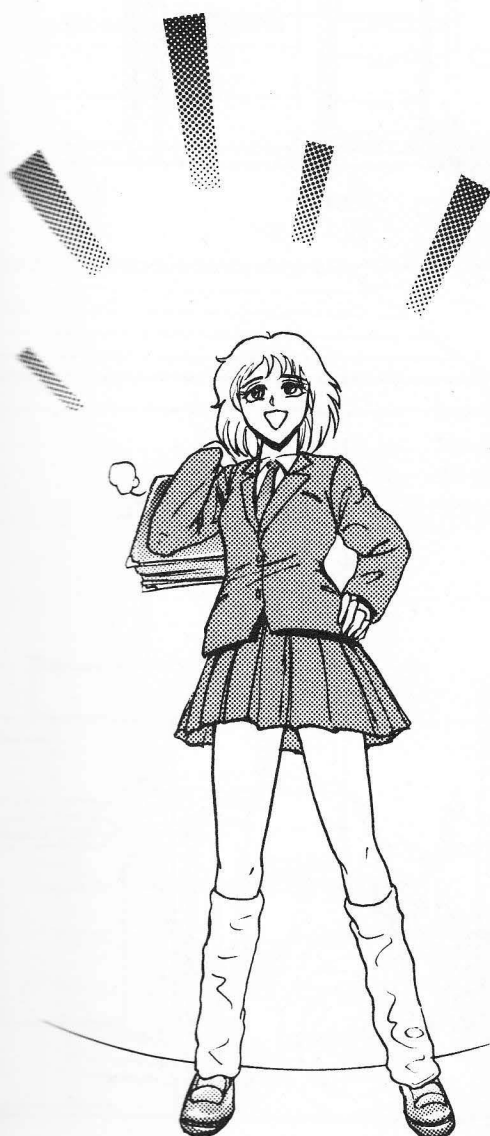
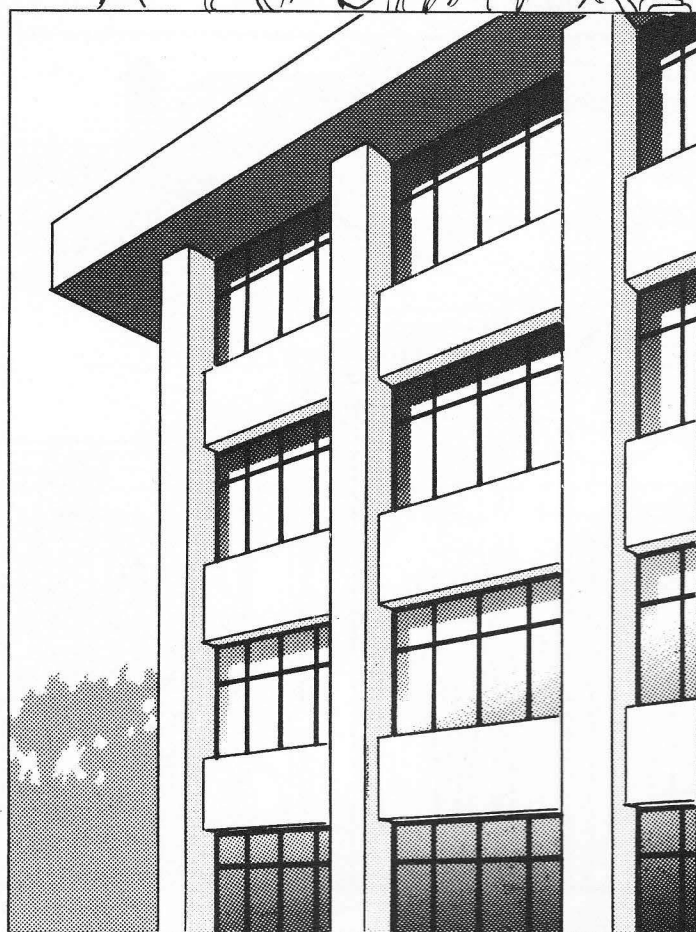


7

The page is complete
after you have finished
adding detailed tone!

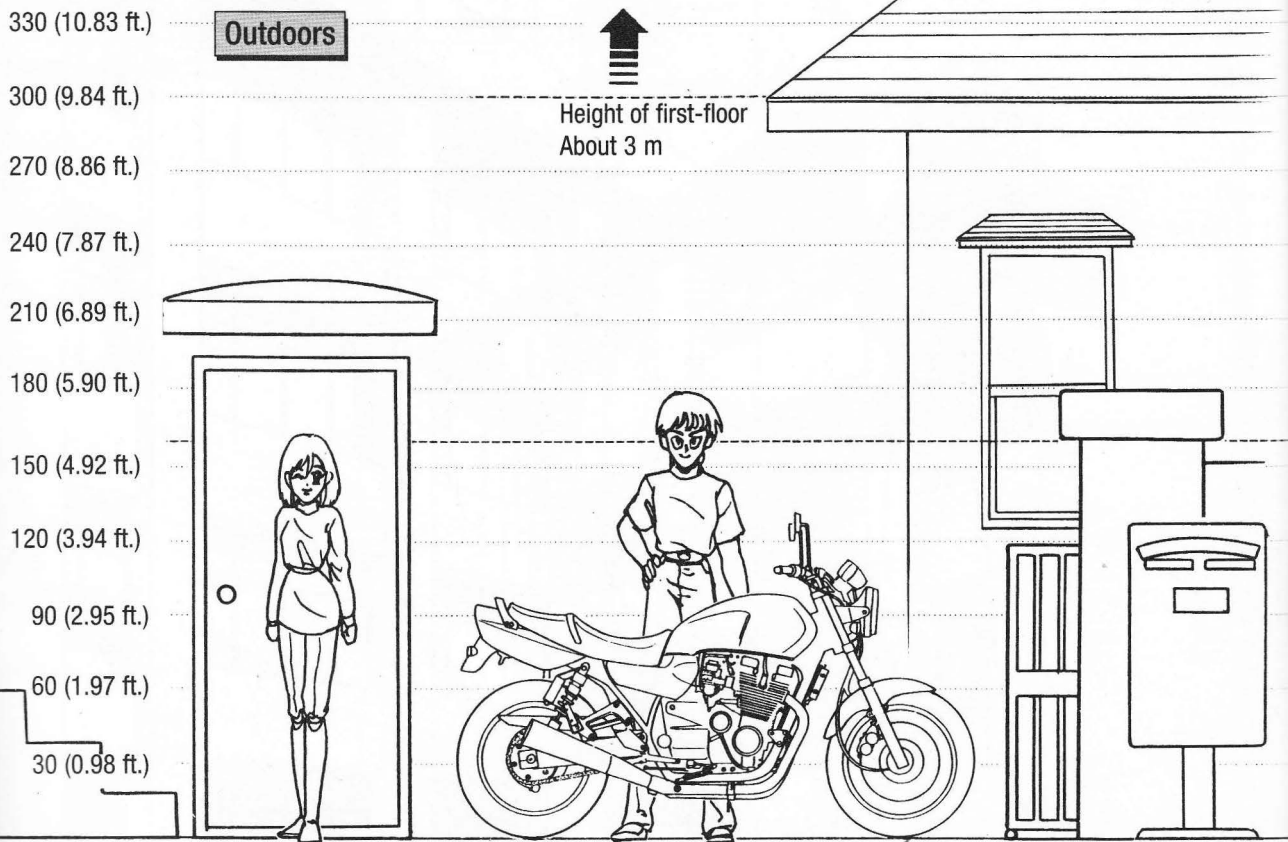
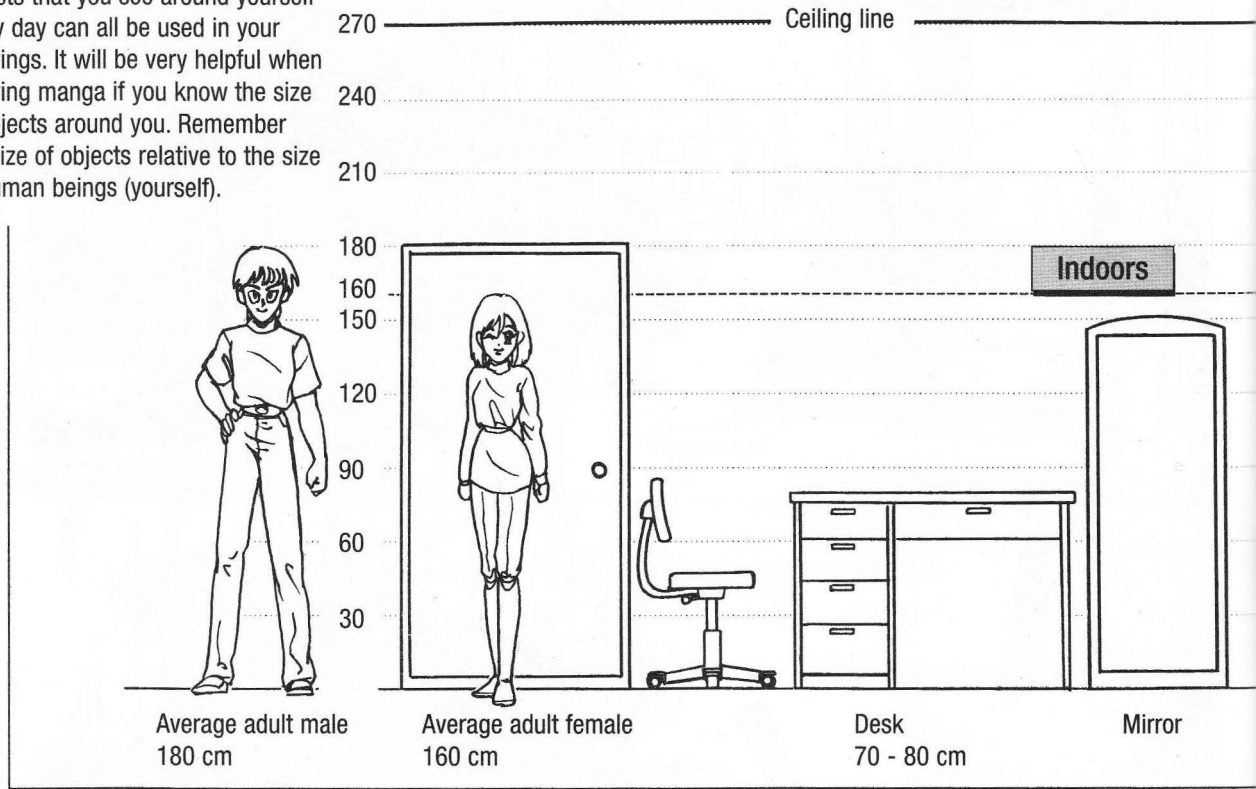


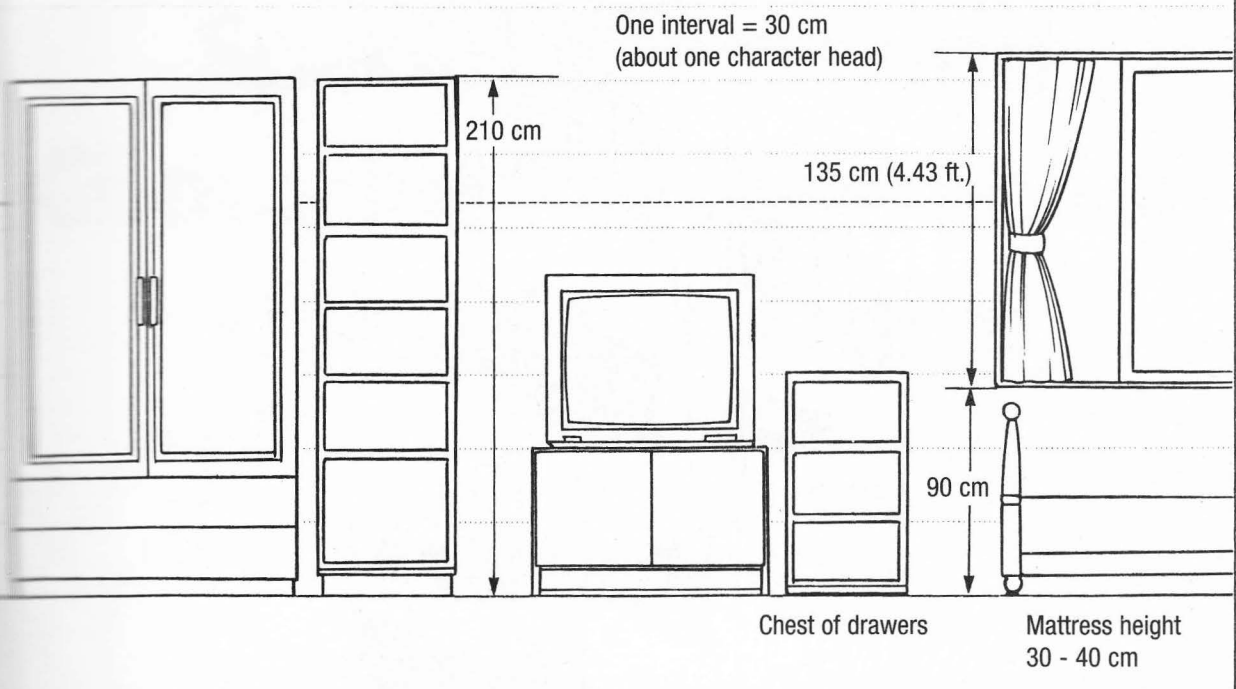
Hard touch: Apply tone discriminately.



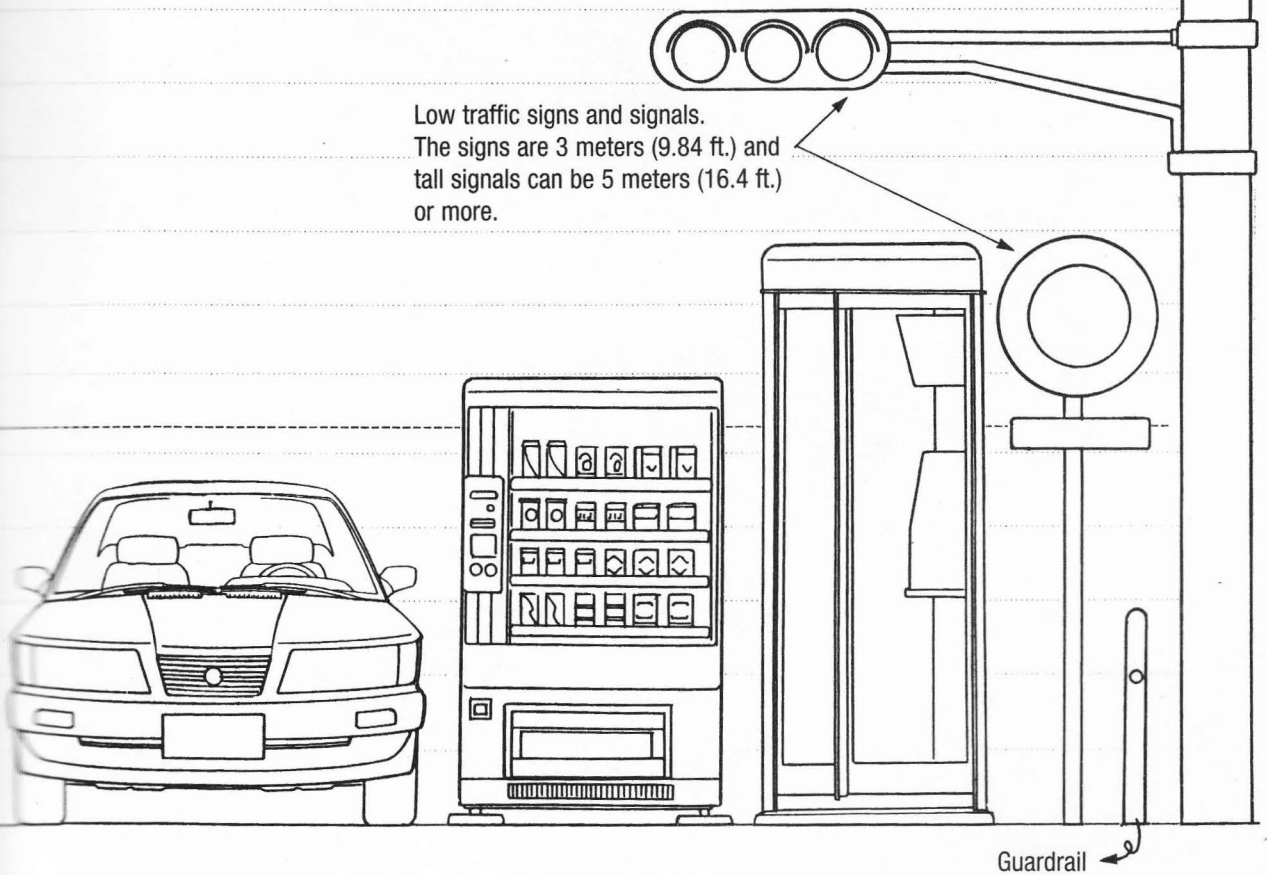
Comparison of Characters and Objects

Objects that you see around yourself every day can all be used in your drawings. It will be very helpful when drawing manga if you know the size of objects around you. Remember the size of objects relative to the size of human beings (yourself).



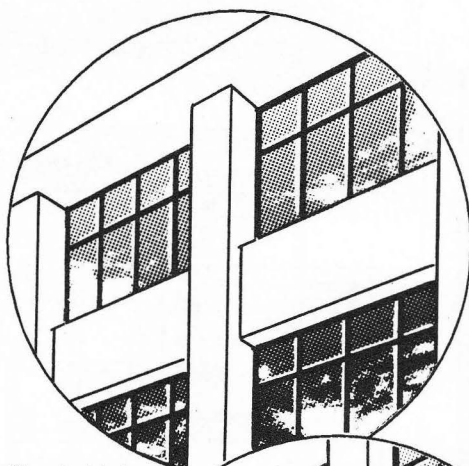


Low traffic signs and signals.
The signs are 3 meters (9.84 ft.) and
tall signals can be 5 meters (16.4 ft.)
or more.

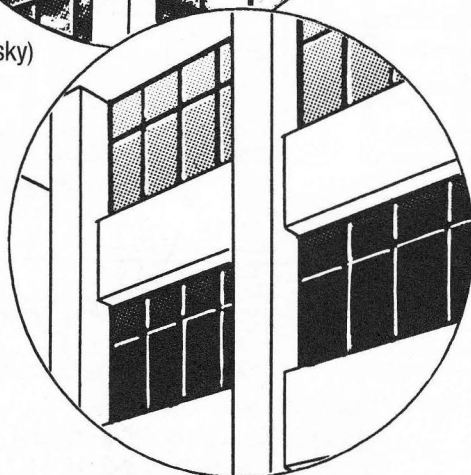


Reflections

Adding reflection tone to windowpanes creates a more realistic atmosphere.



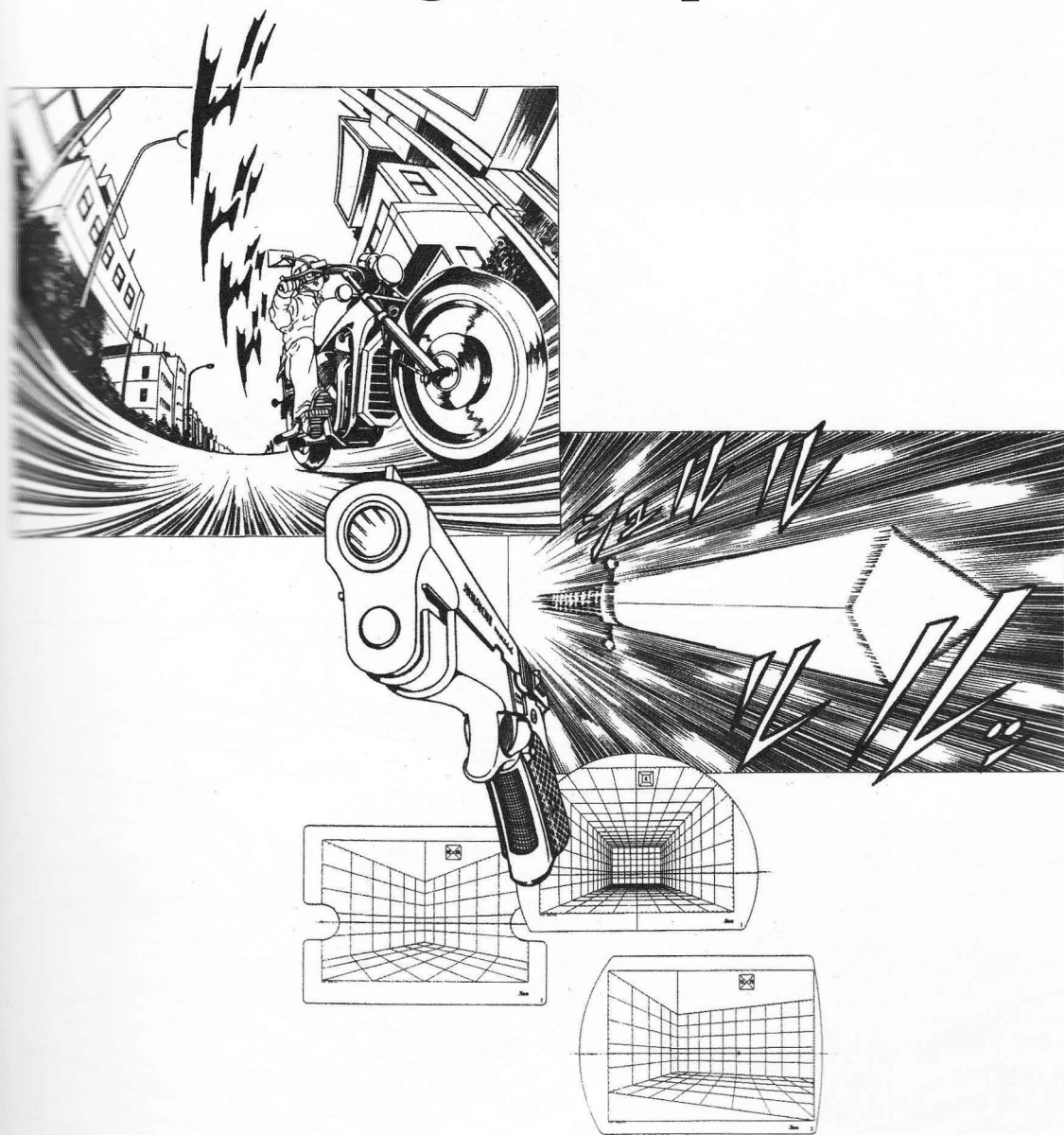
Clouds (sky)



Shadow from opposite building

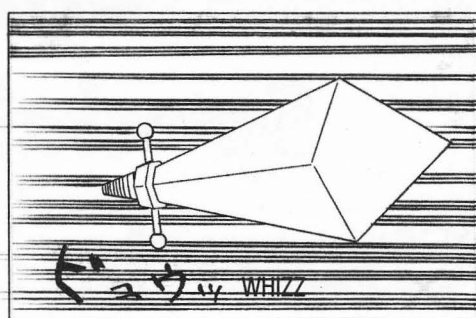
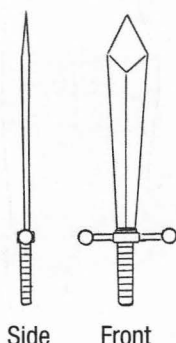
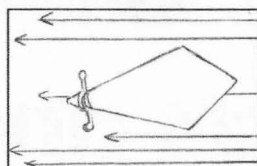
Chapter 6

Special Effects and Character Representation Using Perspective



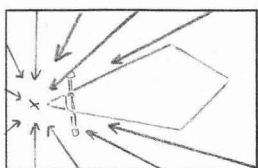
Drawing Special Effect Lines and Sound Words Using Perspective

Use of perspective is not limited to buildings and backgrounds. It can be used for anything that is part of a picture. That includes special effect lines and sound words.

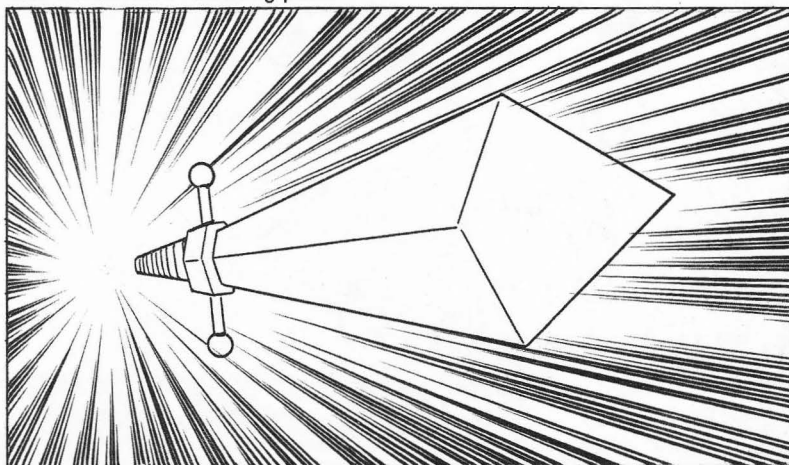


The sword in this picture was drawn in perspective, but the sound word and special effect lines were not.

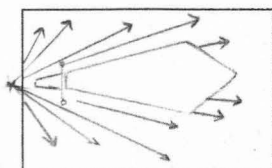
The special effect lines (concentration lines) were drawn from the sword's vanishing point.



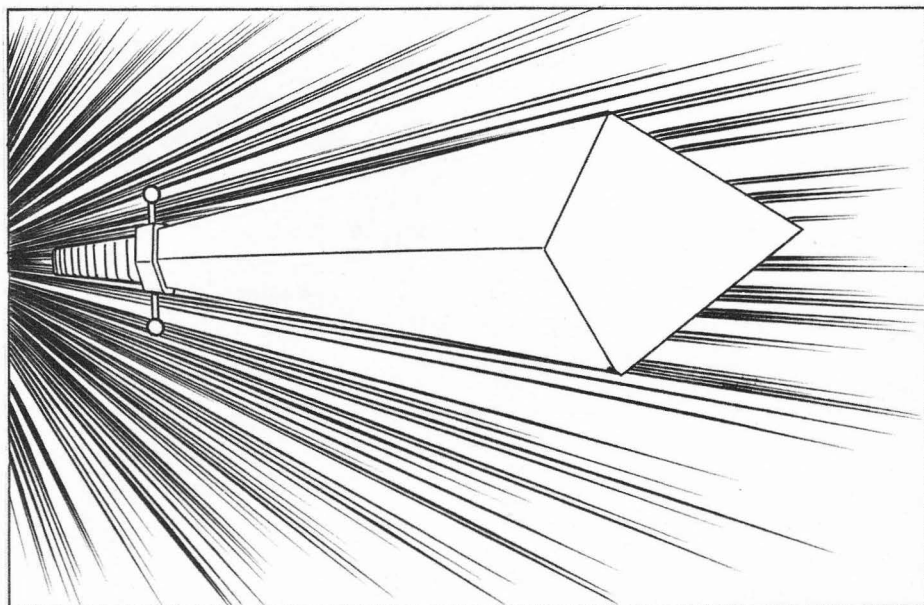
- Special effect lines when the vanishing point is in the picture
- Draw them toward the vanishing point.



This sword was drawn with a vanishing point farther away and the special effect lines were drawn accordingly.

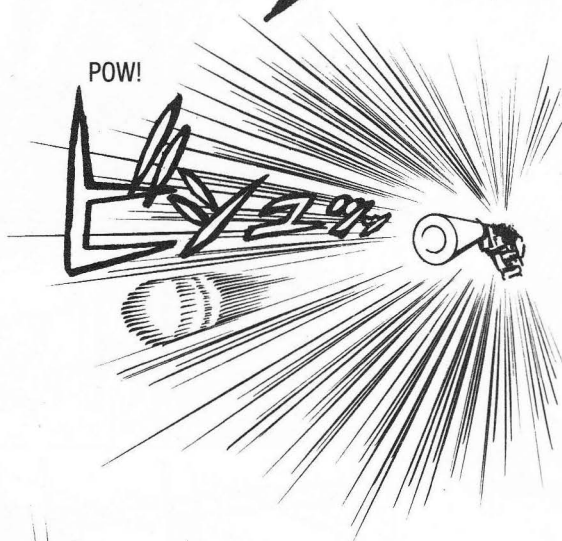
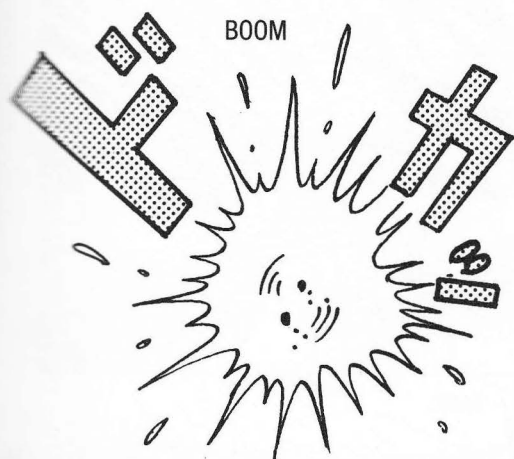
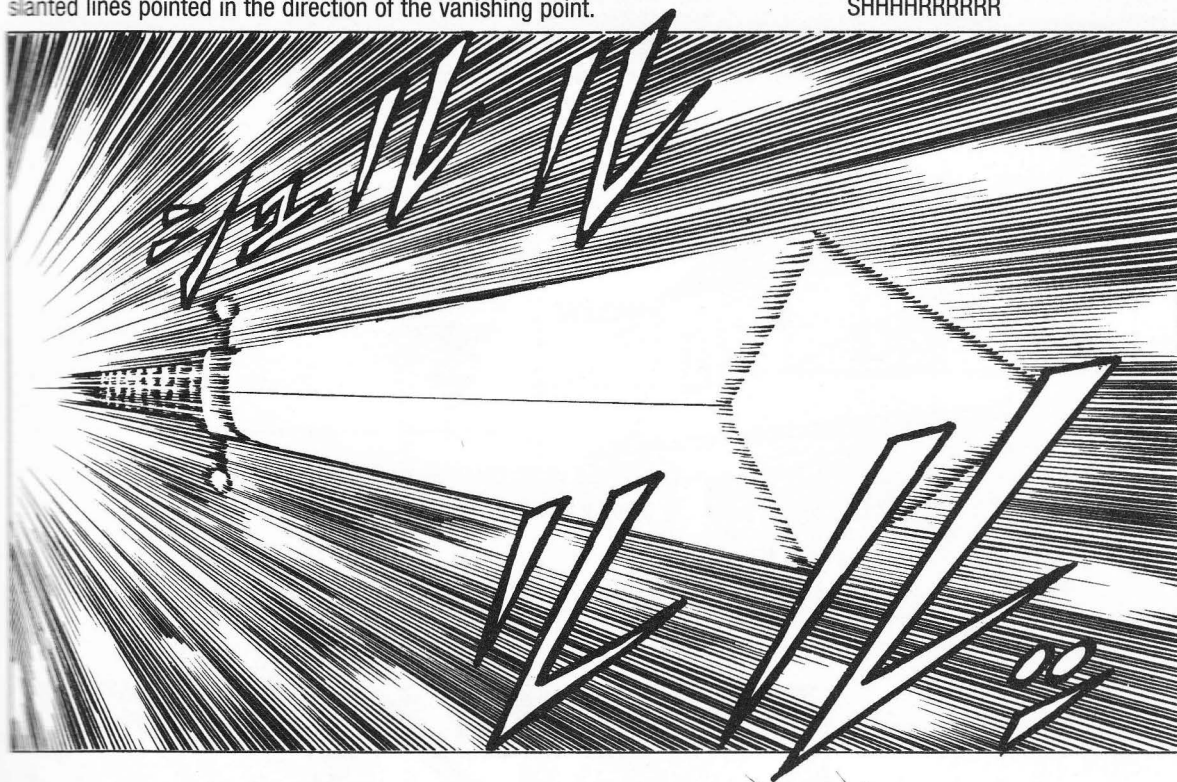


- Special effect lines when the vanishing point is outside the picture
- Draw them away from the vanishing point.



Some of the contour lines of this sword were represented by slanted lines pointed in the direction of the vanishing point.

SHHHHHRRRRRR



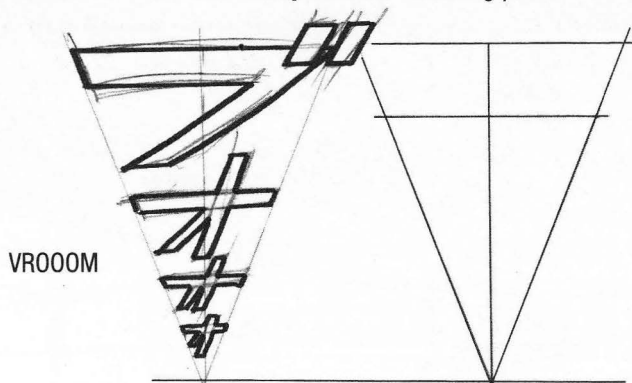
Sound words are said to be pictures. Draw them with perspective in mind to make them look cool.



How to draw sound words with perspective in mind



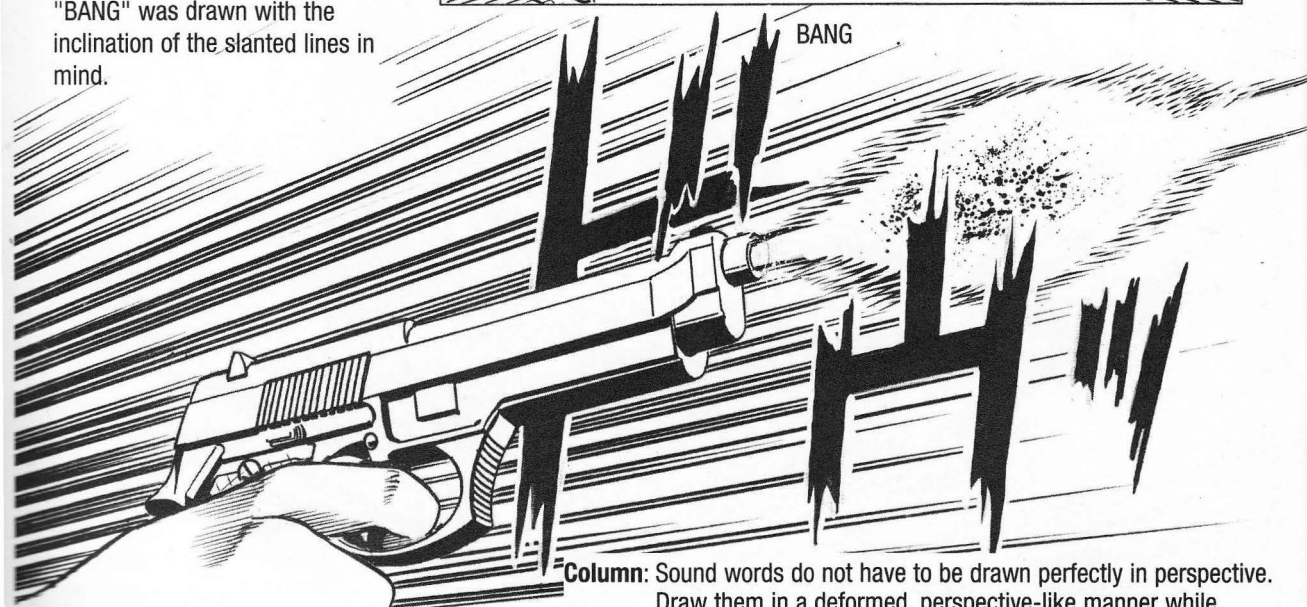
Special effect lines when the vanishing point is outside the picture.
Draw them away from the vanishing point.



Design the word. Draw vertical lines in general direction of vanishing point.



"BANG" was drawn with the inclination of the slanted lines in mind.

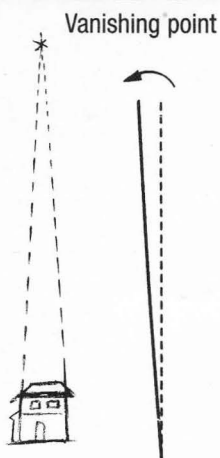


Column: Sound words do not have to be drawn perfectly in perspective. Draw them in a deformed, perspective-like manner while thinking of depth and direction.

Creating a Greater Sense of Existence Using Minor Techniques

When a picture strictly drawn in two-point perspective does not turn out to be very interesting, move the perspective upwards.

Making vertical lines slightly slanted will create a sense of existence and depth.



Do not go to the trouble of marking a point. Draw a house assuming that the vanishing point is above the house.

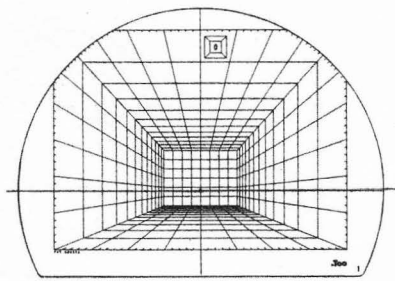


Manga and drafting techniques

Many drafting techniques are used to draw manga, but drawing manga is not drafting. If it is effective to do so, use drafting techniques flexibly. For instance, you do not have to use three-point perspective just because the vanishing point is above the picture.

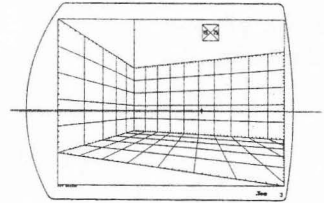
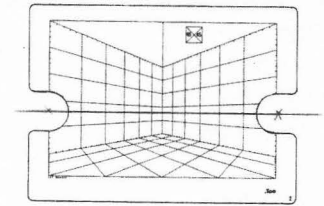
Drawing with Perspective Rulers

Perspective rulers (Too Corporation) are transparent, plate-type drawing tools with floor and wall perspective lines. They come in one-point, two-point and three point perspective types. They allow you to easily draw objects with vanishing points far away, so use the type that matches the angle or image you want.



One-point perspective type

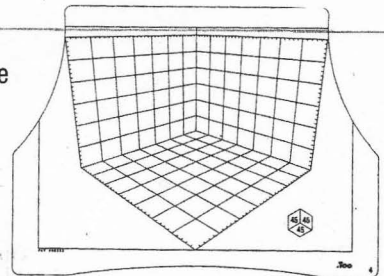
(The horizon line was added in this book.)



Two-point perspective type

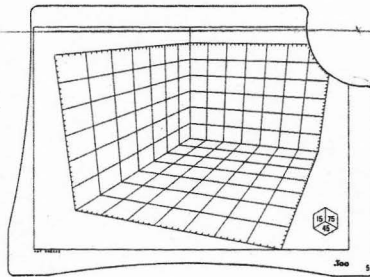
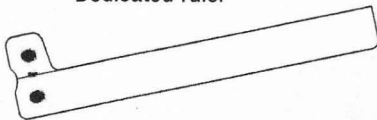


Horizon line

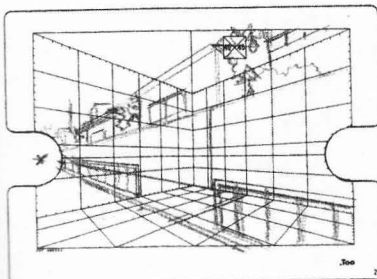


Three-point perspective type

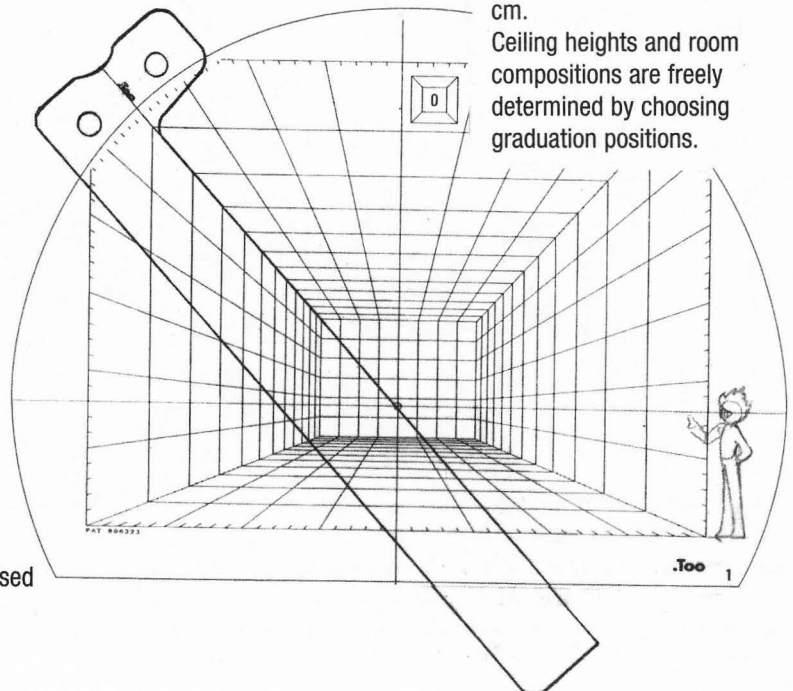
Dedicated ruler



When you align the dedicated ruler that comes with it with the plate's curved surface, slanted lines and depth lines will converge on the vanishing point.



The two-point perspective ruler can be used as the basis of a one-point perspective background.



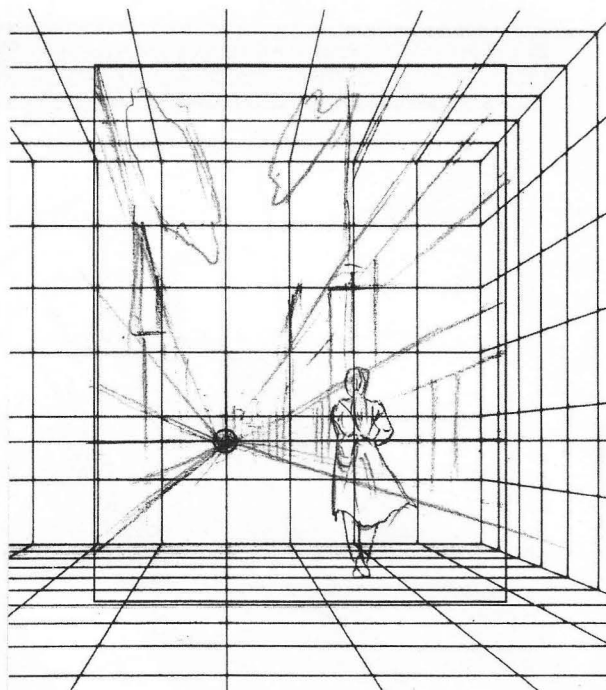
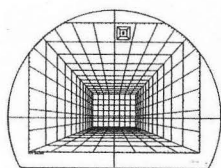
If you assume that one graduation is 20 cm, the graduations are designed so that the height of the horizon is 160 cm.

Ceiling heights and room compositions are freely determined by choosing graduation positions.

Example: Drawing using one-point perspective pattern



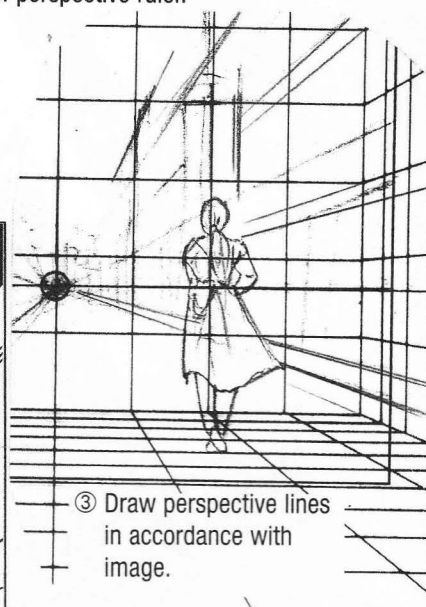
① Rough sketch with horizon line and outline.



② Align horizon of perspective ruler.

Advice

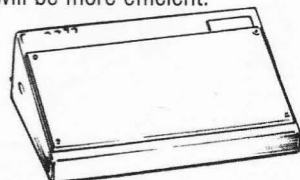
- Use the graduations on perspective rulers to their full potential.
- It is very convenient to use perspective rulers after drawing a rough sketch.
- Draw a horizon line on your rough sketch when using the one-point and two-point perspective type perspective rulers.



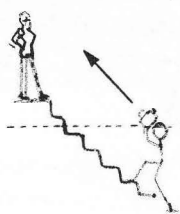
③ Draw perspective lines in accordance with image.

Using a tracing box

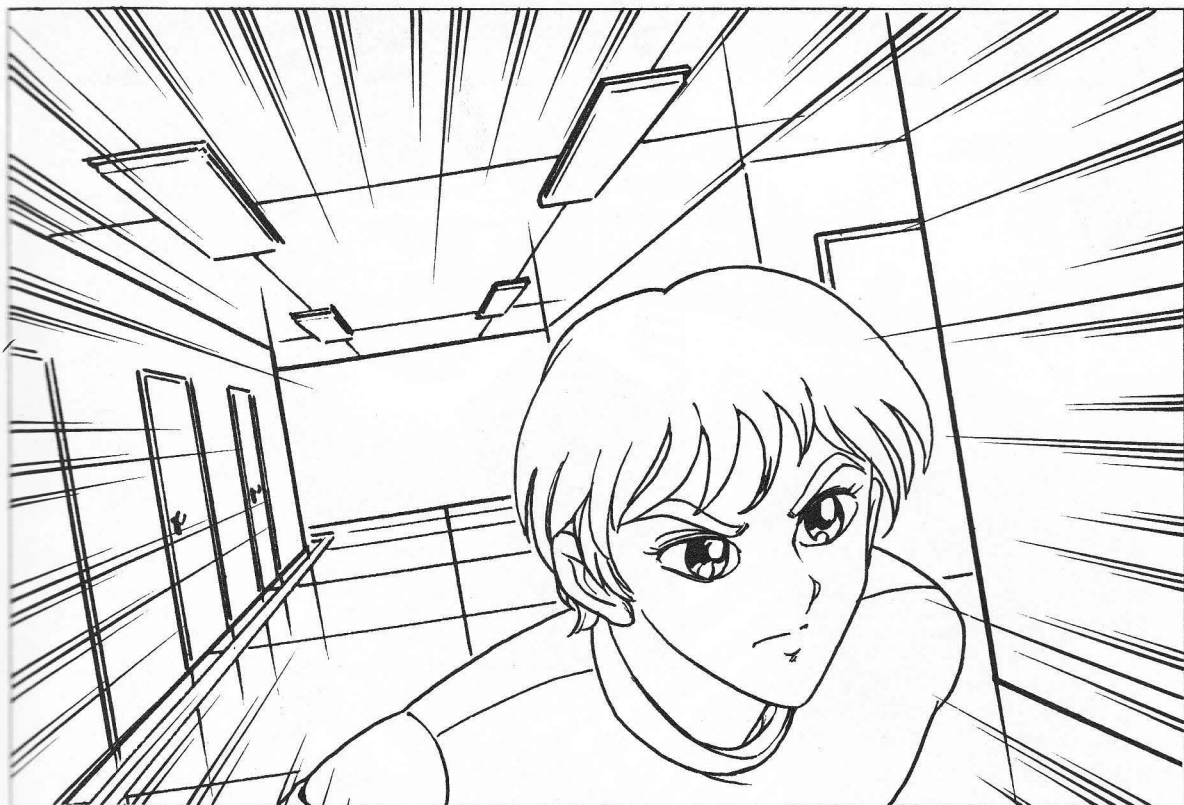
Tracing paper is usually placed over a perspective ruler, but using a tracing box will be more efficient.



Special Effects Using Perspective Techniques



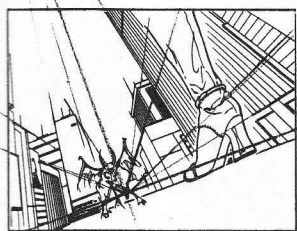
The horizon line is two steps down from the top of the stairs. The horizon line is oblique relative to the picture.



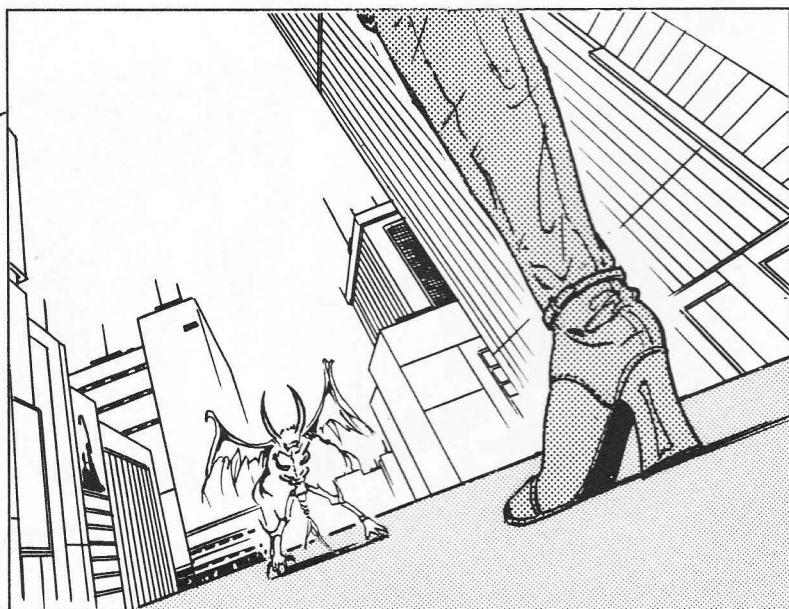
Even if you draw a character normally, you will get a powerful composition by tilting the horizon line.



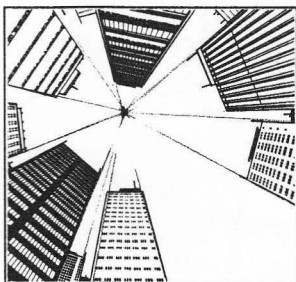
Simple one-point perspective-
all the artist did was tilt the
horizon line.



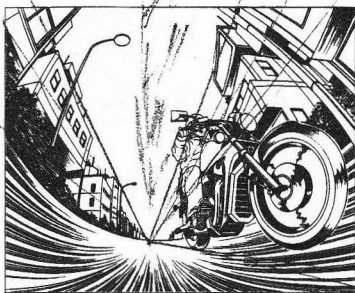
The ground has been tilted.
The buildings were drawn
using vertical two-point
perspective.



Column: Overuse of this technique of
tilting the horizon line relative
to the picture can result in a
page that is confusing to look
at. Save it for special
situations.

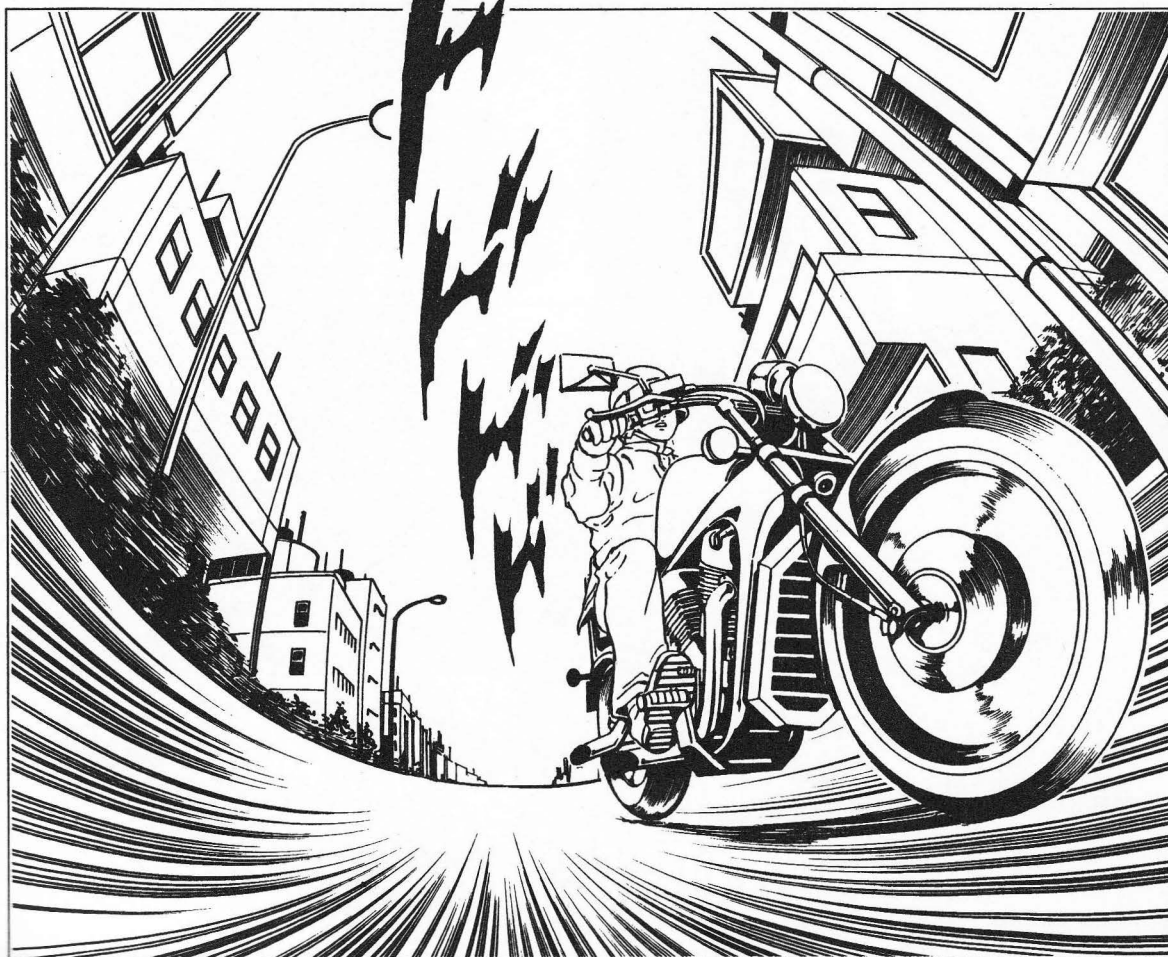


Looking straight up.
Simple one-point perspective.

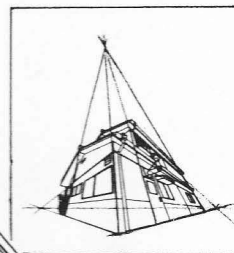
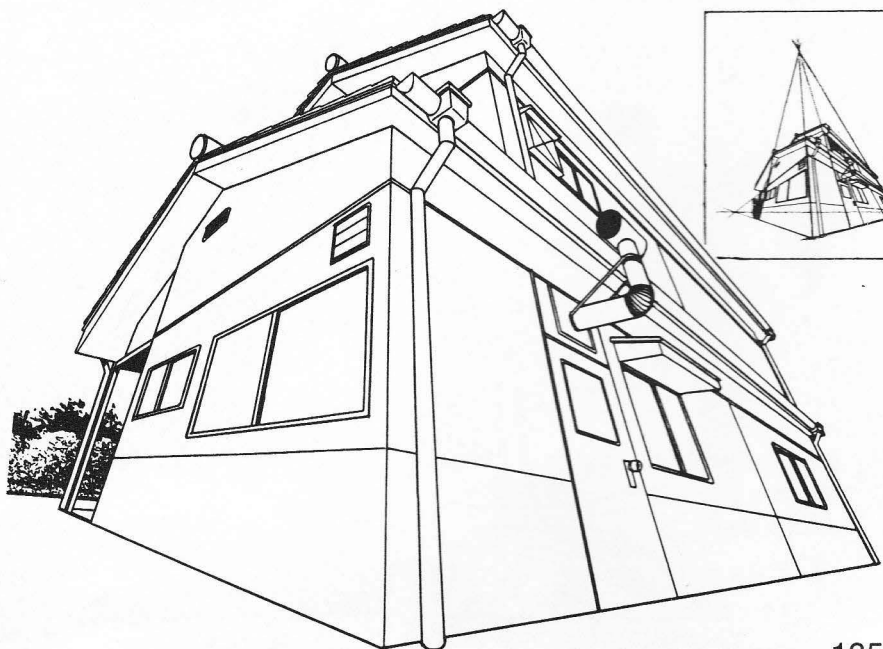
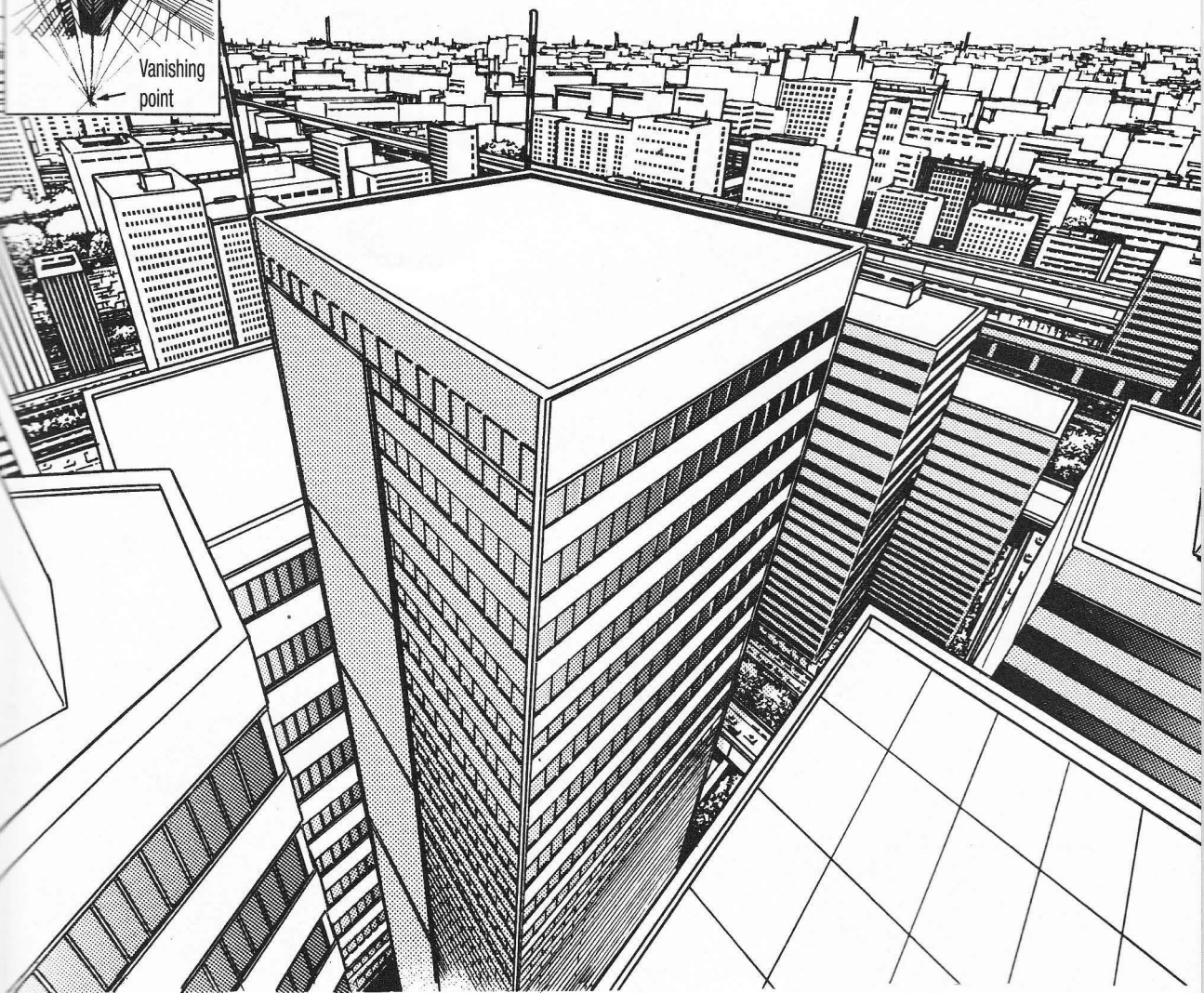
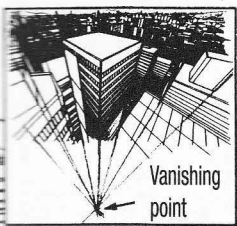


One-point perspective where the horizon
was tilted and curved.
Draw perspective lines and special
effect lines using curved lines.

Rumble



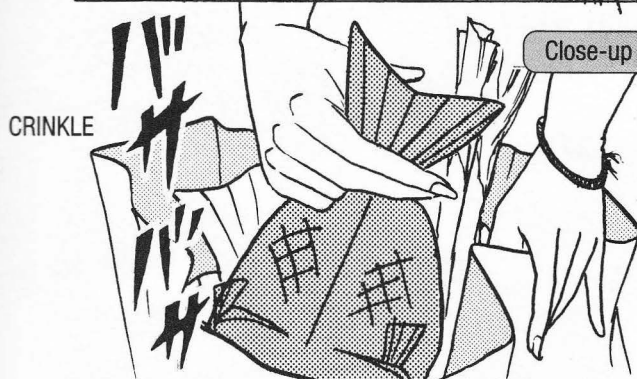
Various wide angles



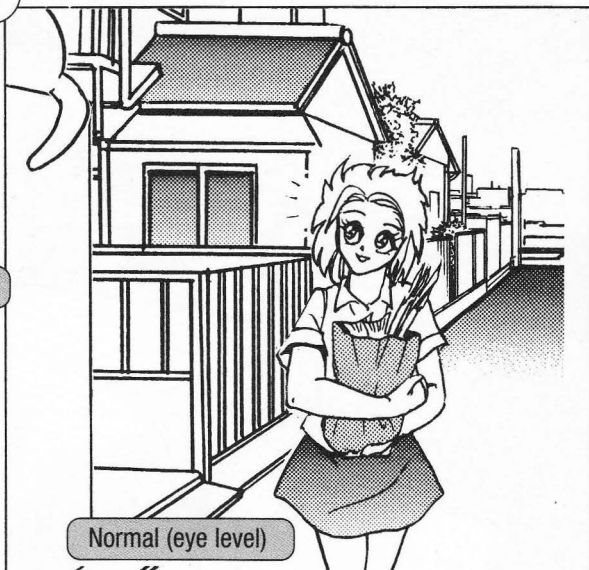
Examples/Changing Camera Angles



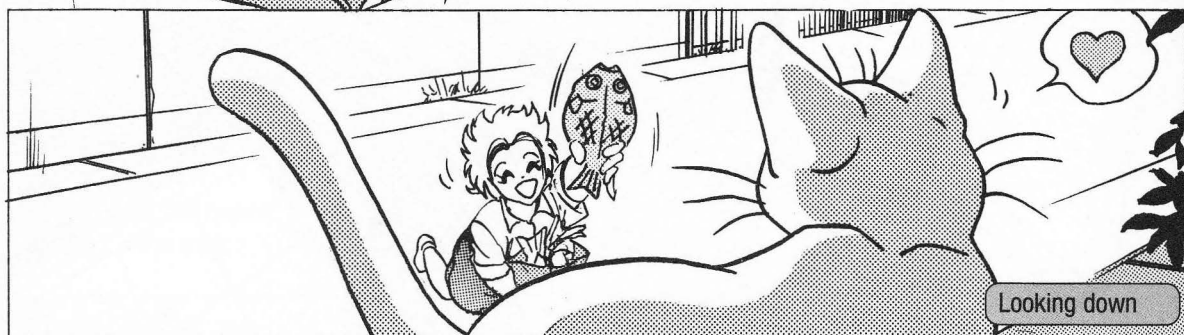
Looking up



Close-up



Normal (eye level)



Looking down



Draw manga like you would film a movie or video.

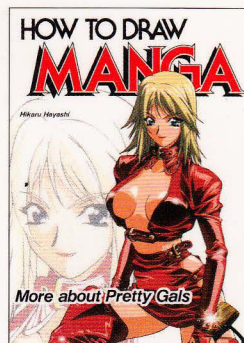
You can make an effective presentation by changing the camera angle.



Long shot



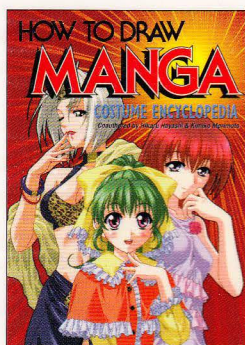
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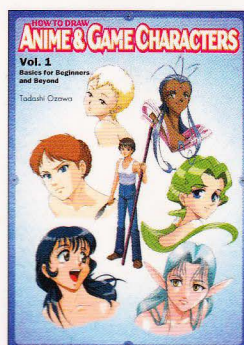
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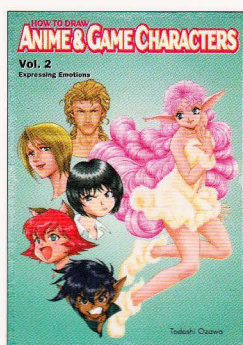
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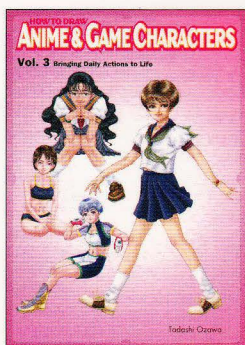
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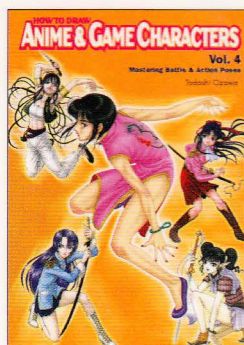
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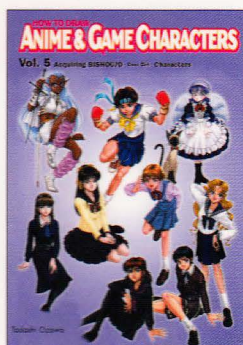
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