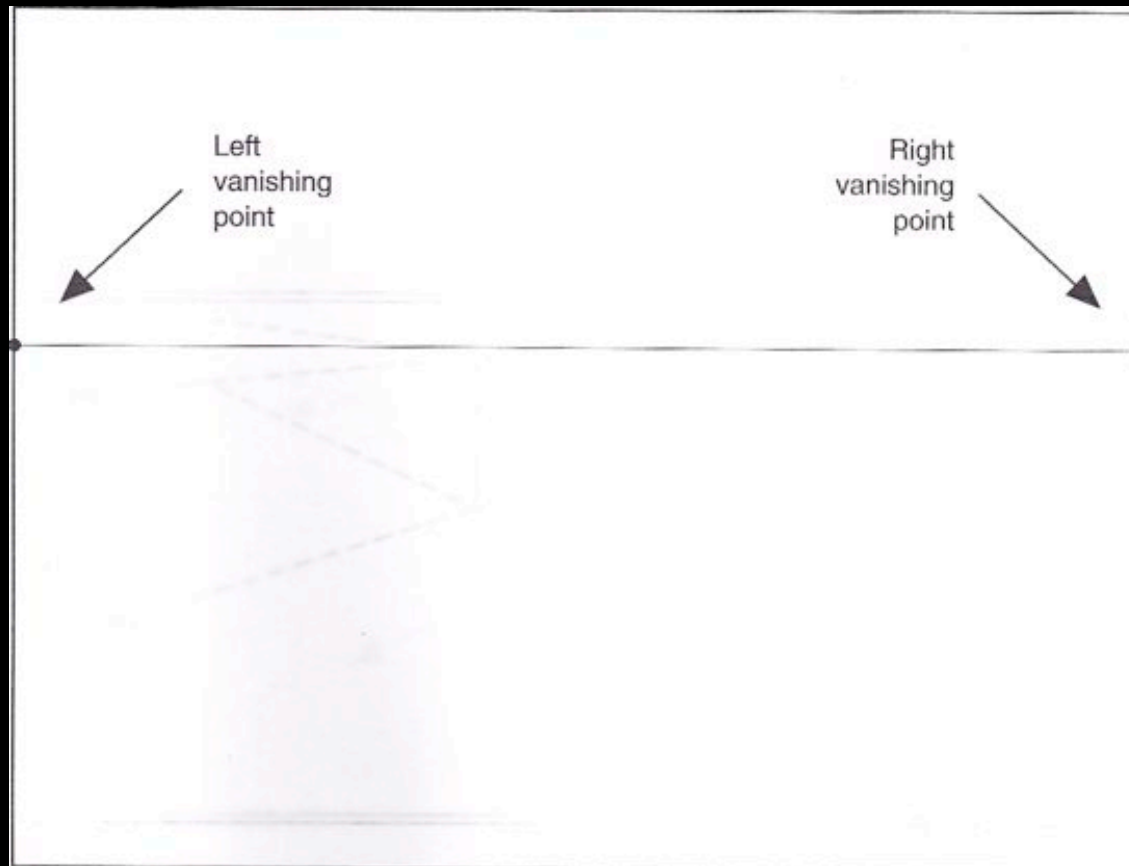


# 2 Point Perspective

From Learn to Draw 3-D

By: Doug DuBosque

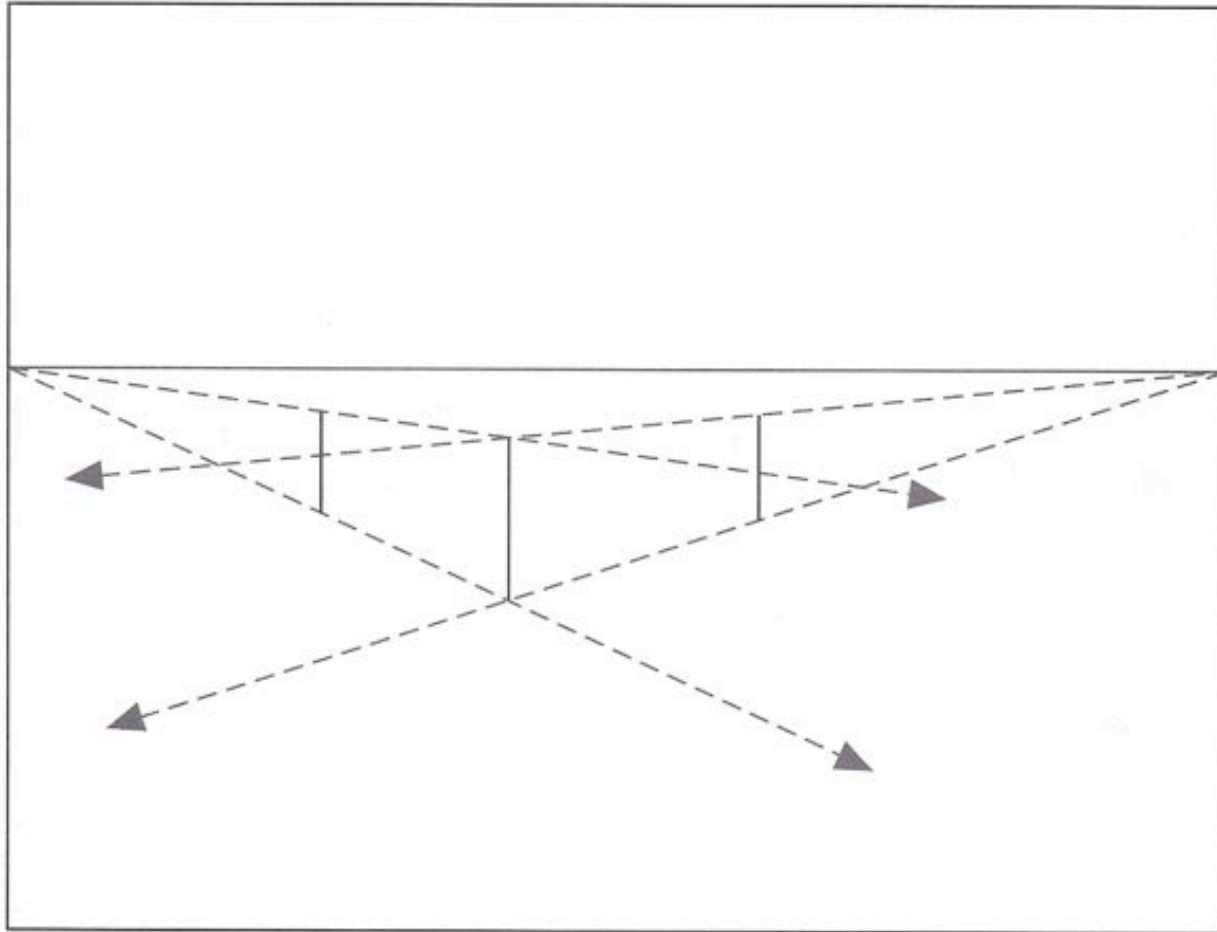


**W**hat we're going to do next—a drawing in two-point perspective—may seem confusing at first. Do each step carefully, and try to make your drawing just like the one in the book. That way, if you lose track of which lines go where, you can back up a step or two.

Once you master the basics, please don't follow the book—because when you use your imagination, that's when the real fun begins! Make up your own buildings, and try more complex drawings using these techniques.

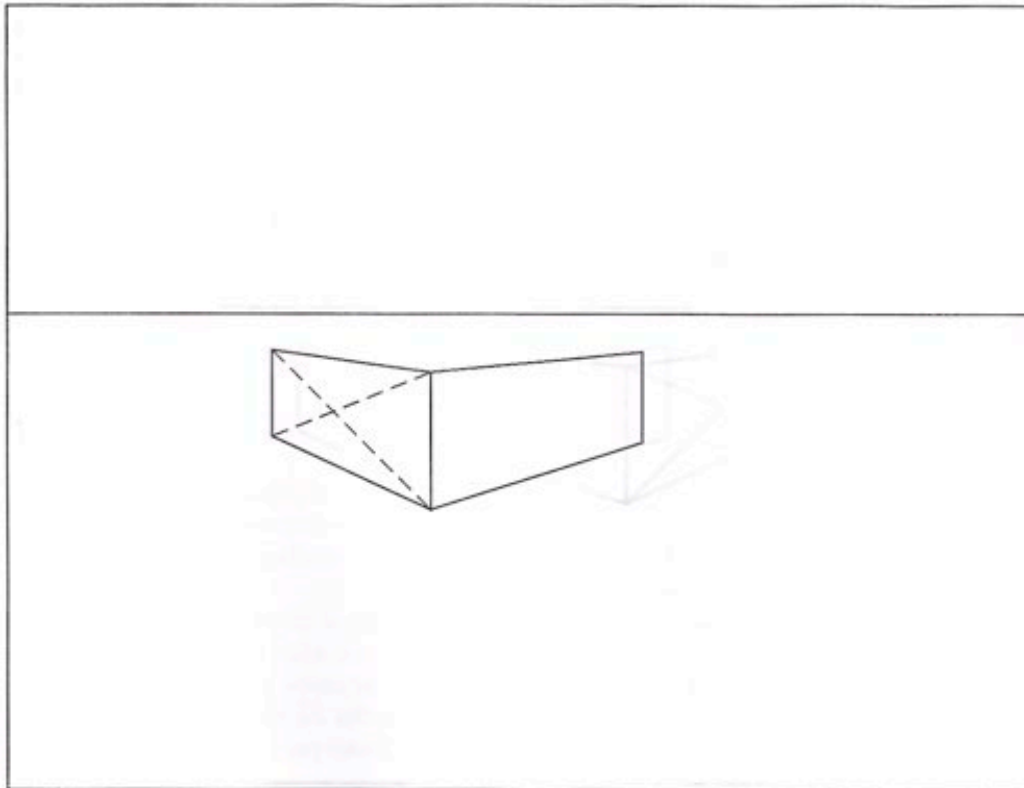
Our two-point perspective drawing starts out with a horizon, and a vanishing point at either end. Remember, each vanishing point needs only be big enough, and dark enough, so that you can see it.

## TWO-POINT PERSPECTIVE



Next add two more vertical lines. Can you figure out what we're drawing? These lines show where the far corners of the house will be.

## TWO-POINT PERSPECTIVE

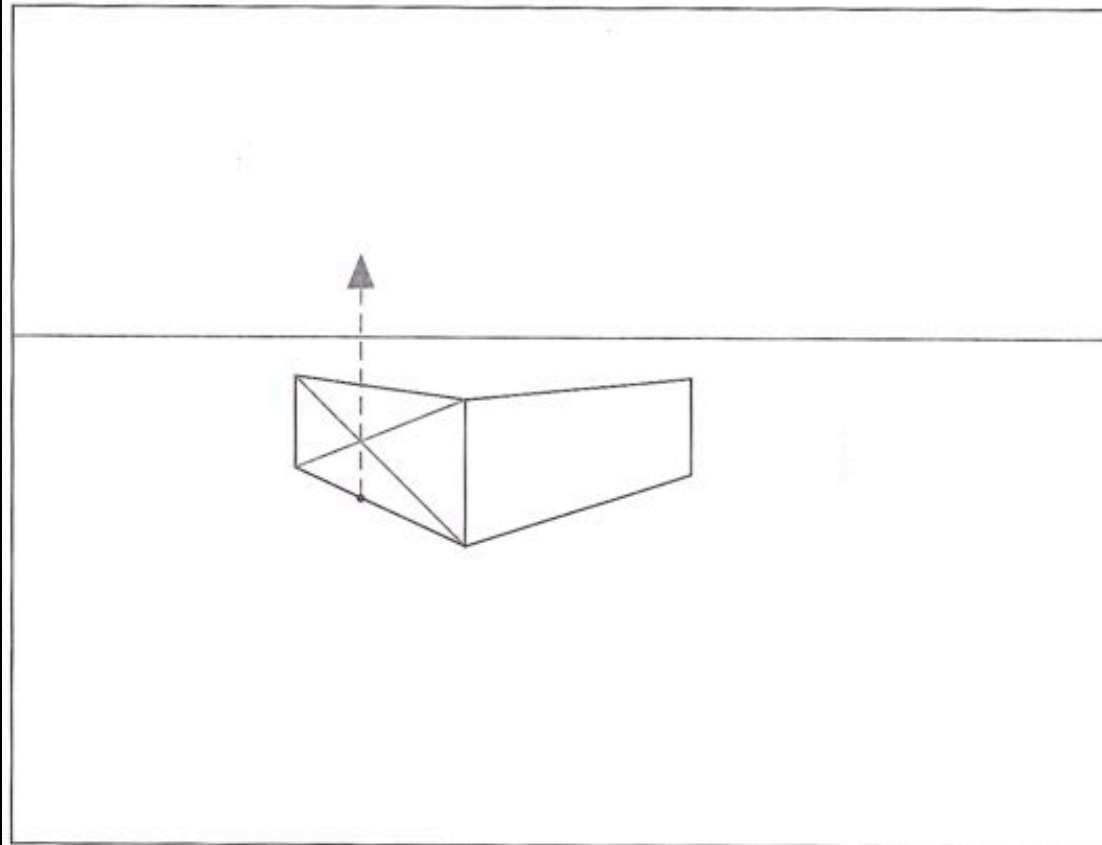


The roof comes next—but first we need to find the center of the wall, so that we know *where* to put the peak of the roof. To find the center of the wall, draw diagonals: make an “X” that connects the corners. The center of the “X” shows the center of the wall—in perspective.

To see why we have to go to such trouble to find the center of the wall, try locating the center of the wall by measuring with your ruler. When you *measure* with a ruler, you can find the center of the line, but not the center of the shape in 3-D.

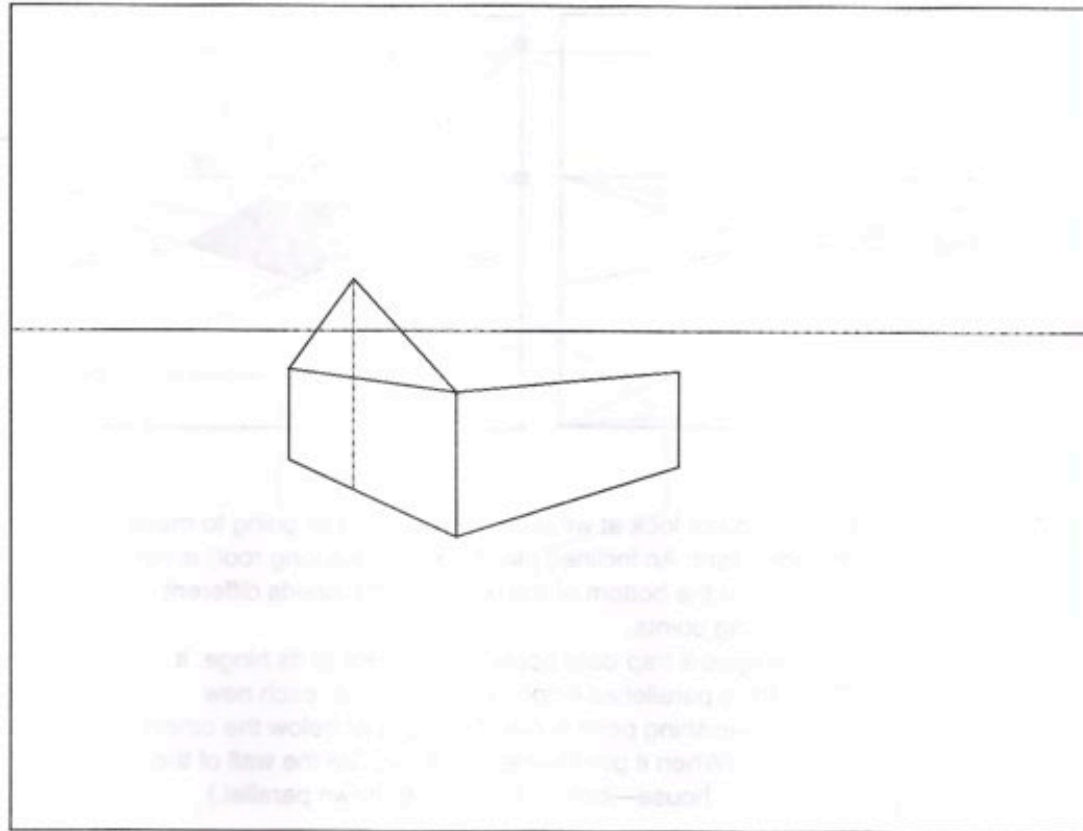
To create a 3-D drawing, you always have to follow the rules....

## TWO-POINT PERSPECTIVE



From the middle of the wall—the crossing point of the “X”—make a vertical line (straight up). Wherever you stop, that will be the peak of the roof. I’ve made mine above the horizon. You could stop below the horizon, or even right on the horizon—but if the top of the roof is exactly even with the horizon, it will be confusing. For your first picture, follow my example, and make the roof above the horizon.

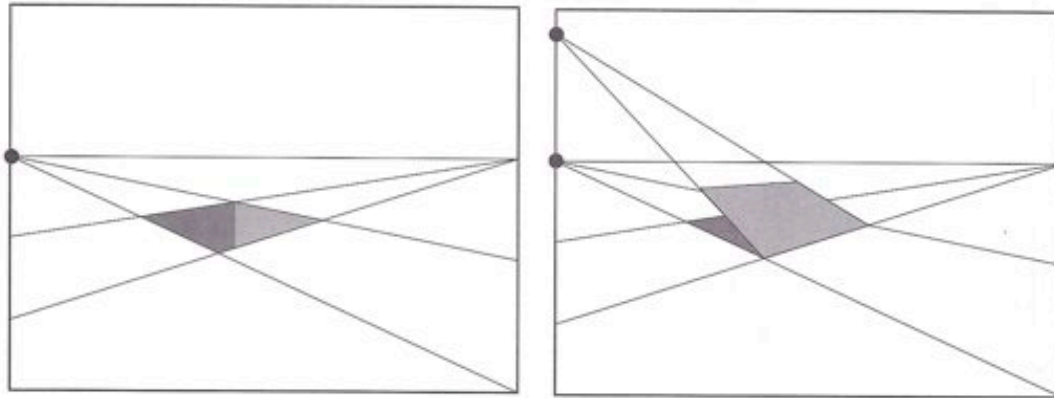
## TWO-POINT PERSPECTIVE



Think of the vertical line as a post that holds up the peak of the roof. Connect the corners of the house to it with lines (they would be rafters in a real house).

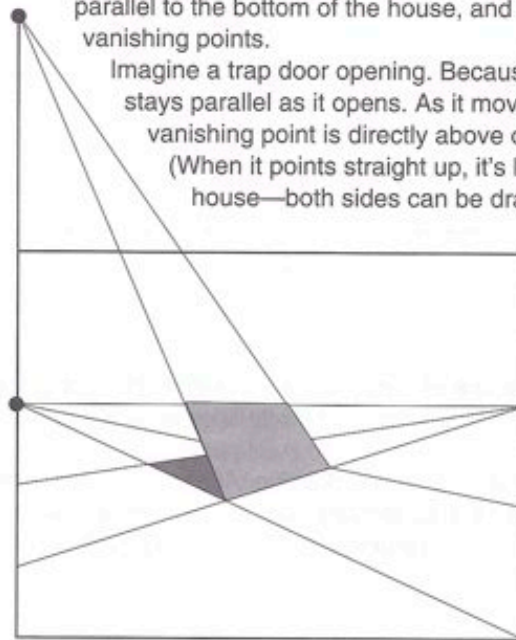
*Note: this is a 'wide-angle' drawing. After a few more pages, I'll tell you more about locating the vanishing points to make the drawing look more 'normal.' As you practice, you can refine your technique.*

## TWO-POINT PERSPECTIVE

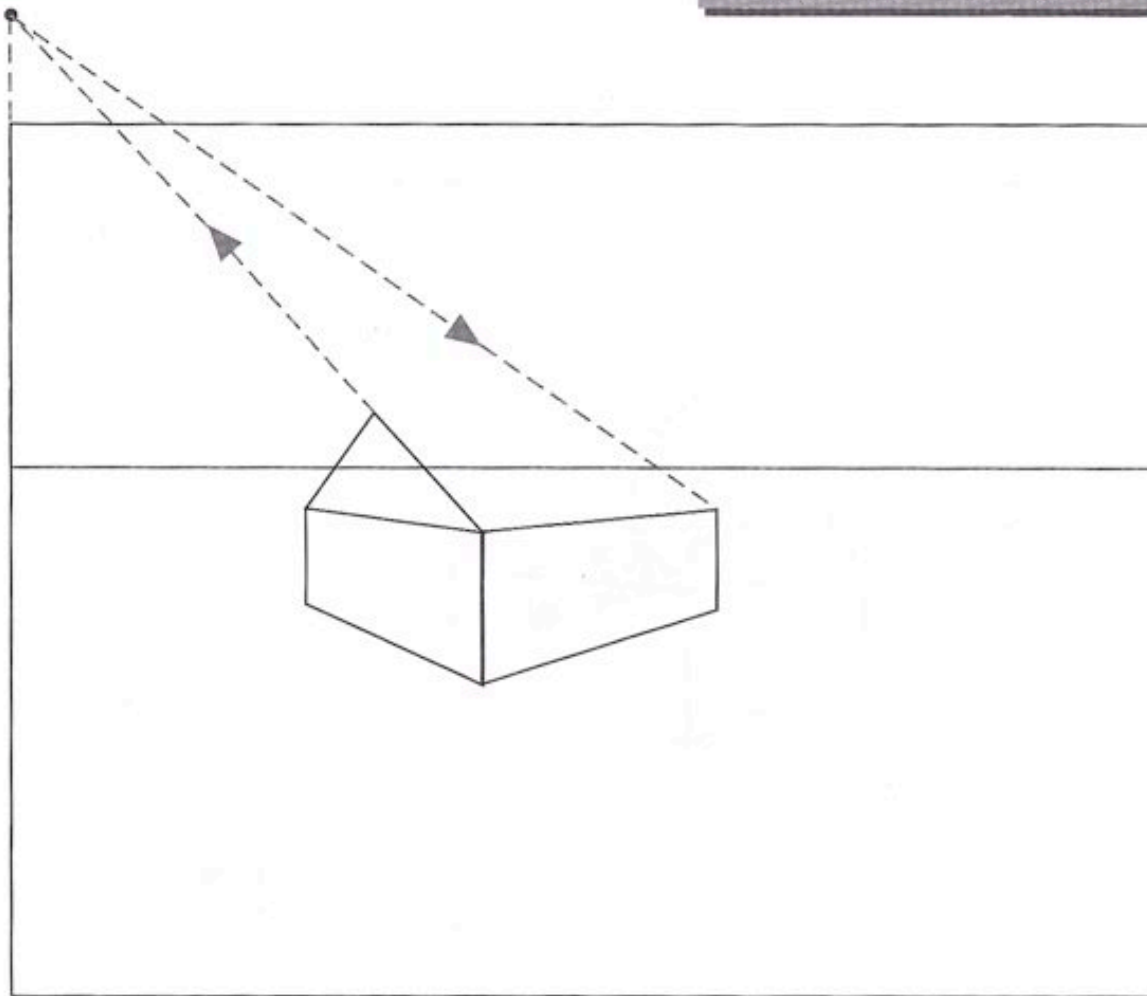


Here's a quick look at what comes next. We're going to make the roof slant. An inclined plane (like the slanting roof) is not parallel to the bottom of the house, and it needs different vanishing points.

Imagine a trap door opening. Because of its hinge, it stays parallel as it opens. As it moves, each new vanishing point is directly above or below the others. (When it points straight up, it's like the wall of the house—both sides can be drawn parallel.)



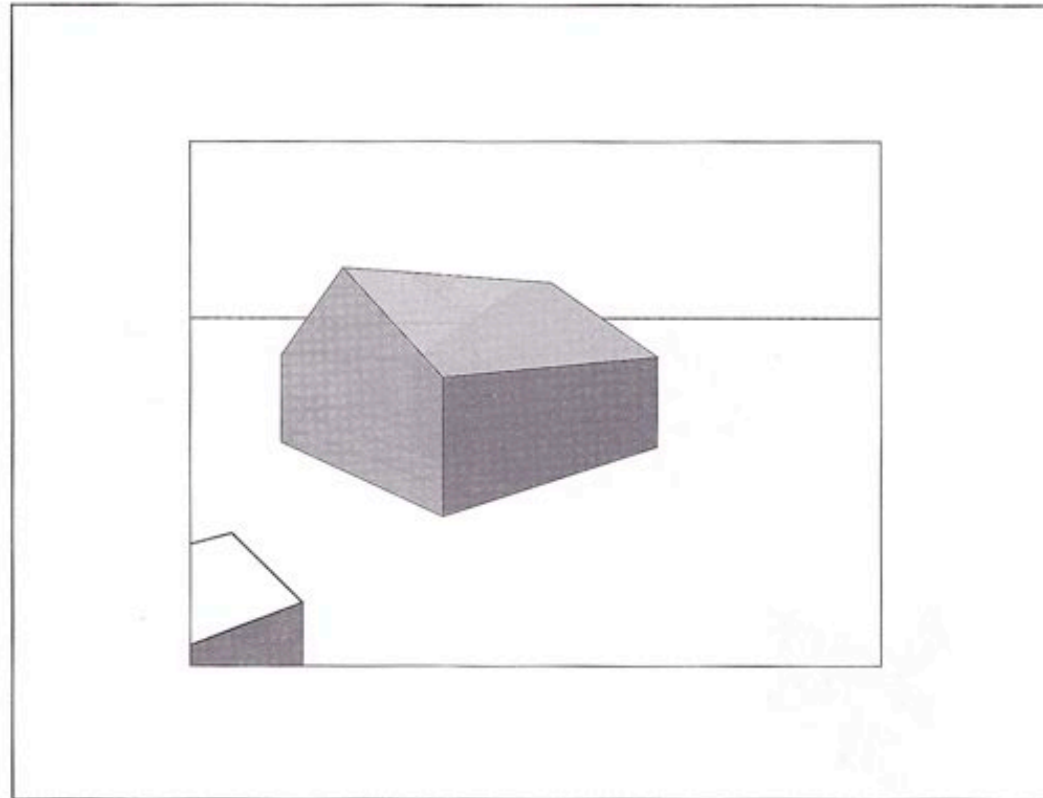
## TWO-POINT PERSPECTIVE



Now you can see the 'proper' way to draw the roof. The front of the roof extends to a point directly above the left vanishing point, making the roof vanishing point. From the roof vanishing point, a line extends back to the far corner of the house, making the back end of the roof.

Less 'proper,' but much easier: just draw it. After a couple of tries, it will probably look fine, without fussing with all the lines!

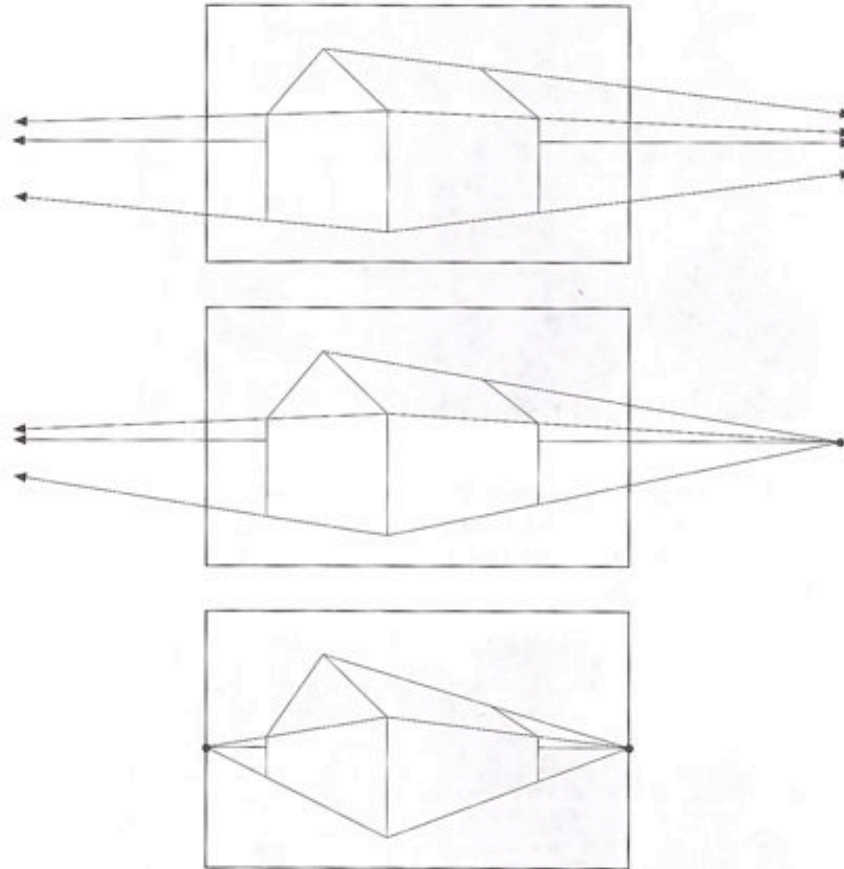
## TWO-POINT PERSPECTIVE



When you make the frame of the picture smaller (in this case, cutting off part of the box) the drawing starts to look more normal. With the frame smaller, the vanishing points are outside the picture.

For most two-point perspective drawing, the vanishing points are well outside the picture frame. It's more complicated to draw that way: you have to fasten the paper down to the drawing surface, get a longer ruler, and so forth. But it's a view that people are used to: once again, refer to the photos of buildings in the back of the book.

## TWO-POINT PERSPECTIVE



These diagrams show how the drawing changes as the vanishing points are moved. In the top drawing, the vanishing points are so far to either side that you don't see them on the page. This is equivalent to looking through a telephoto lens on a camera.

The middle drawing is a more "normal" view. The bottom drawing, with the vanishing points at the edge of the picture frame, is very distorted.

## TWO-POINT PERSPECTIVE

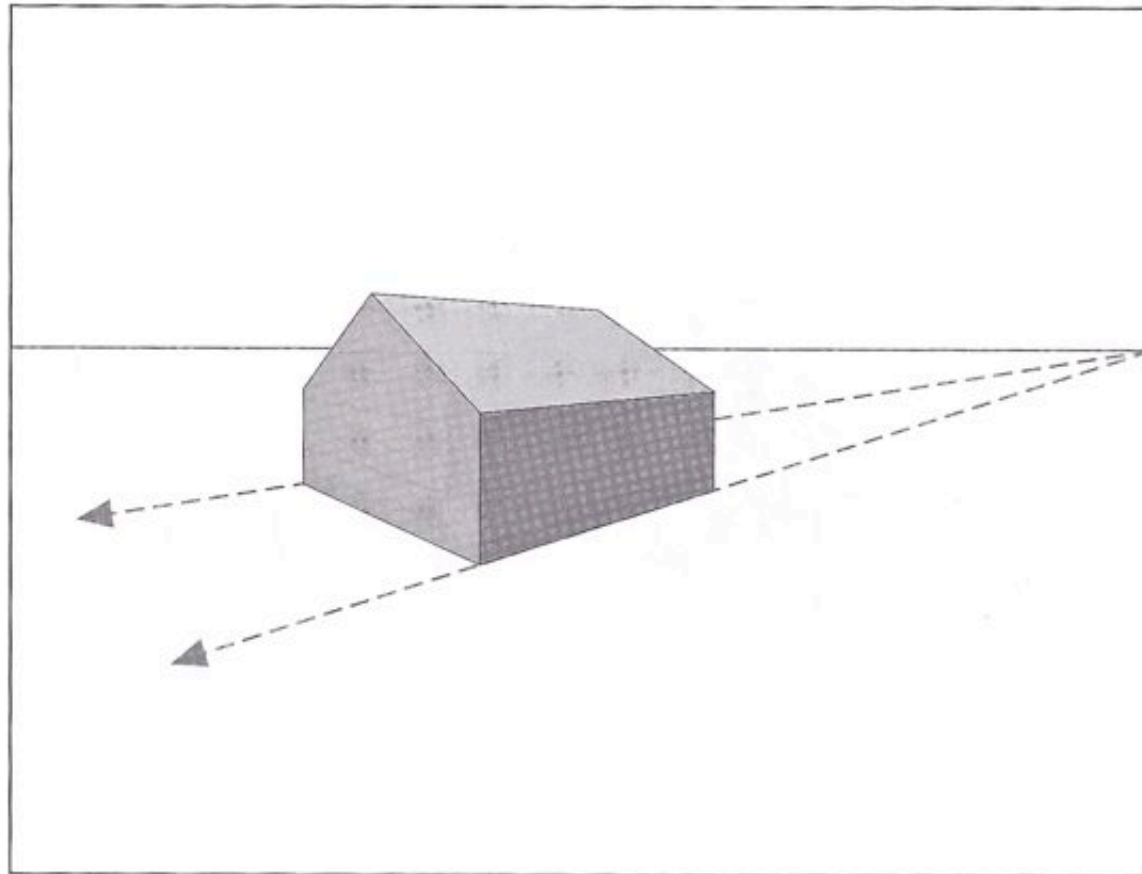


What's the difference between these two pictures?

Look at the lines of the front and side of the truck—can you start to see where you would place the vanishing points if you were drawing?



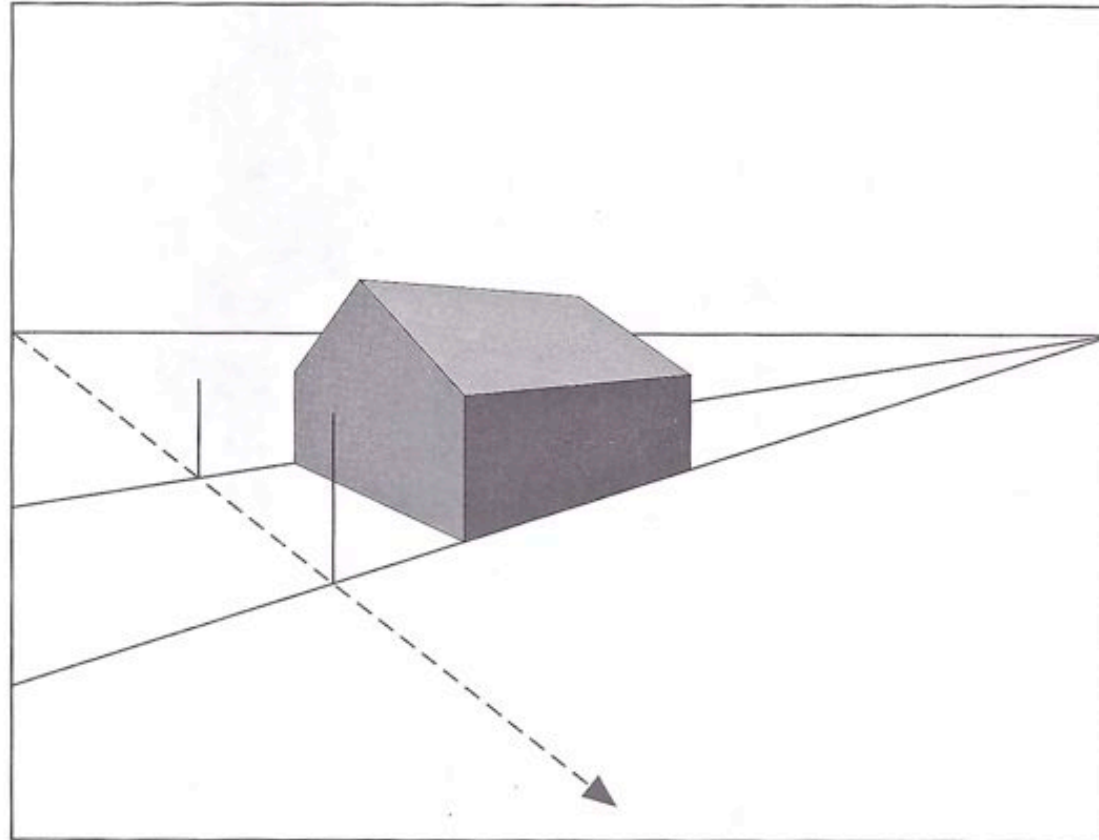
## TWO-POINT PERSPECTIVE



There's still room on our house drawing. Let's build an addition!

Extend two walls of the house from the right vanishing point. (To build an addition on a real house, you would lay out lines with string tied to little wooden posts, very similar to this drawing.)

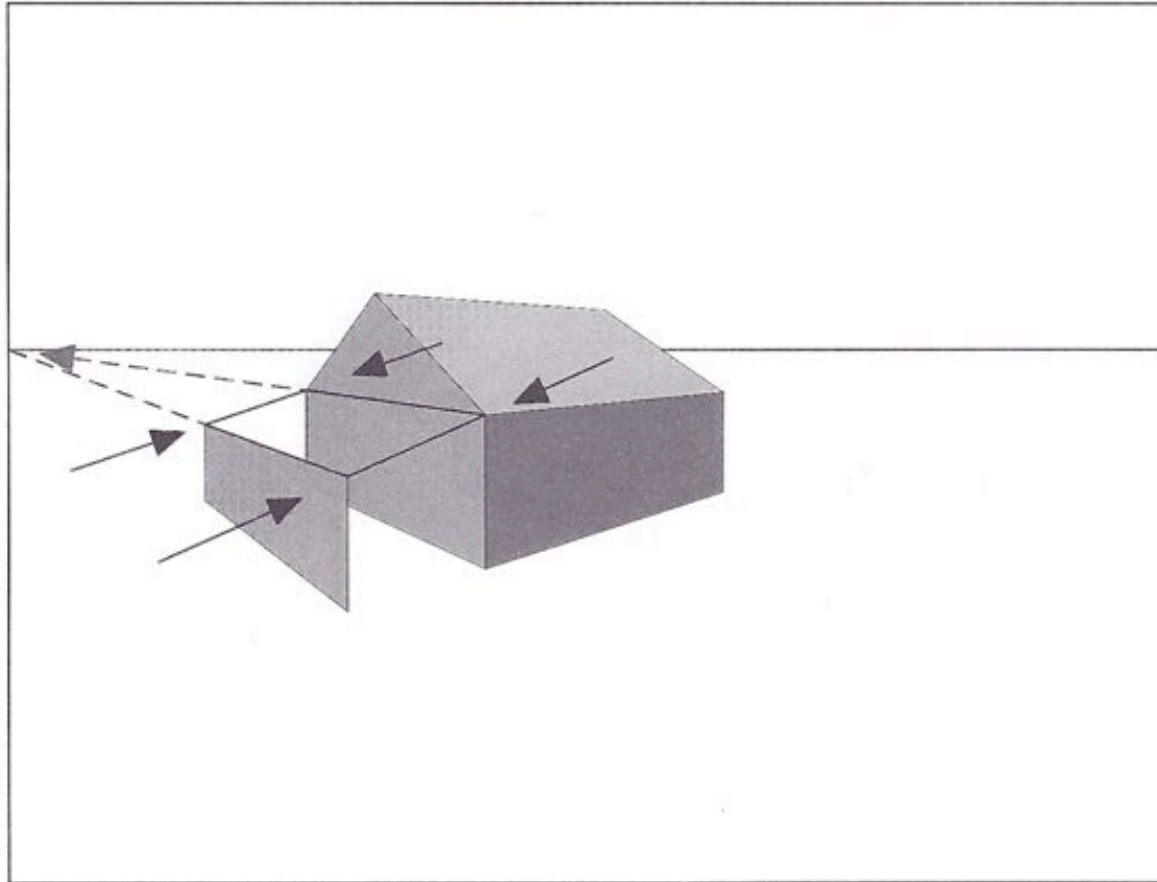
## TWO-POINT PERSPECTIVE



Next, draw a line from the left vanishing point to mark the bottom of the wall. This wall will be parallel to the wall of the house, because it uses the same vanishing point.

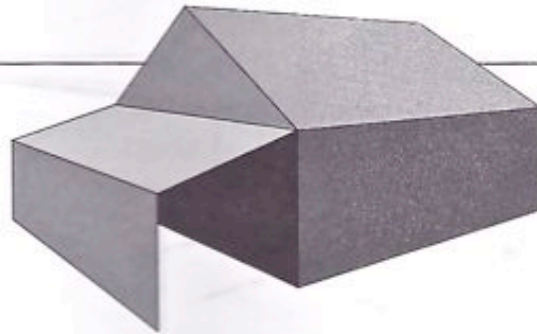
Where the line crosses the first two lines (from the right vanishing point), add vertical lines.

## TWO-POINT PERSPECTIVE



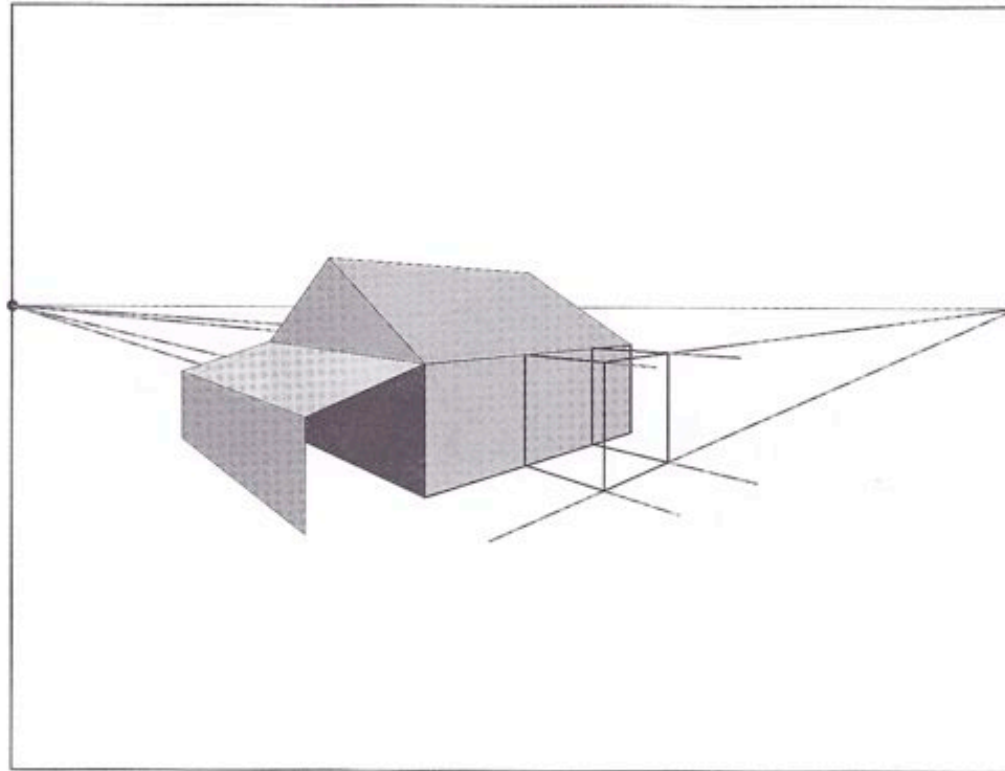
Now connect the corners of the new wall with the existing wall of the house. The line where the roof connects to the house should point towards the left vanishing point.

## TWO-POINT PERSPECTIVE



So here we have it—a handy shed or carport, in which to store firewood, broken toys and bicycles, old washing machines, worn out tires, and all kinds of other great stuff!

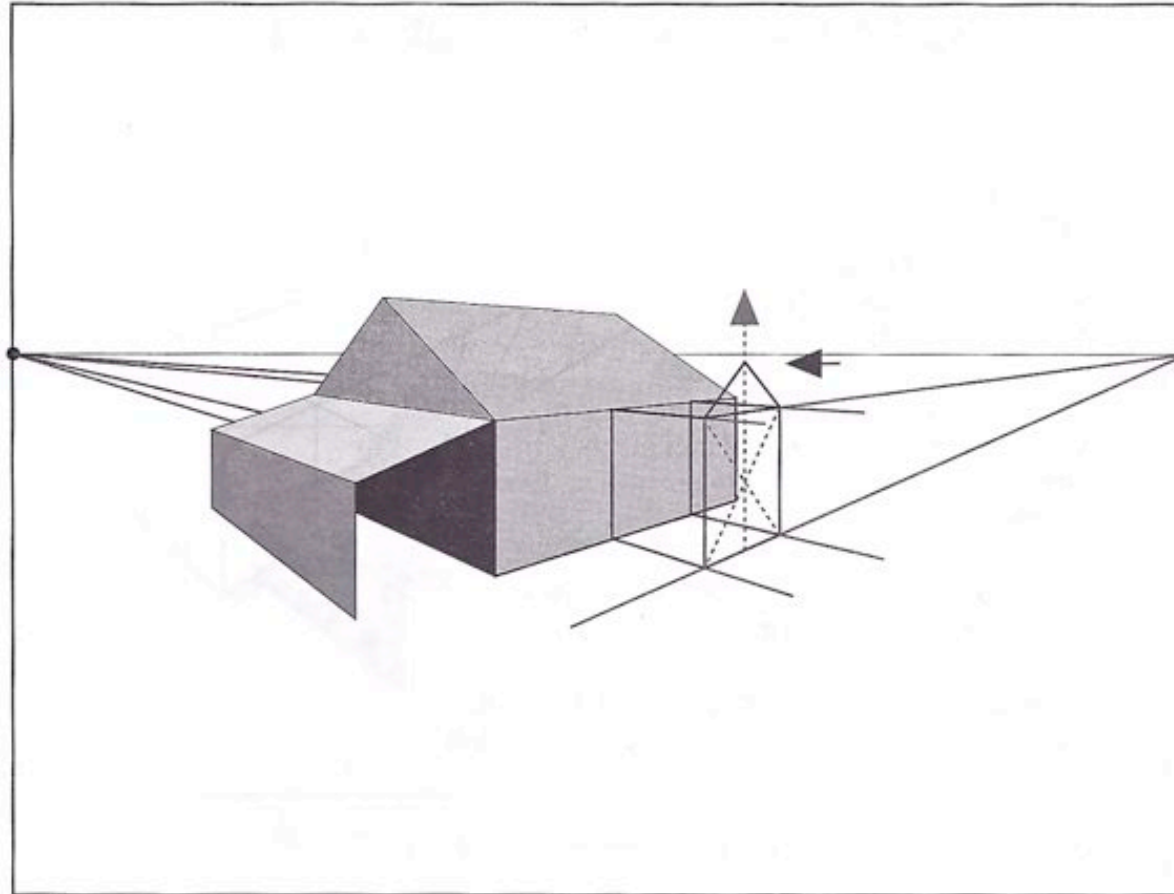
## TWO-POINT PERSPECTIVE



Now—how about a breakfast nook?

I'll go faster this time. Here I've drawn a box as an addition. Notice that I've been careful to use the correct vanishing point for each wall. (And the vertical lines go straight up and down!) I probably wouldn't actually draw the lines to the left of the house, but I would watch carefully while drawing, to make sure my ruler stayed lined up on the vanishing point—it's easy for the ruler to slip just a tiny bit, which can make the drawing look strange.

## TWO-POINT PERSPECTIVE



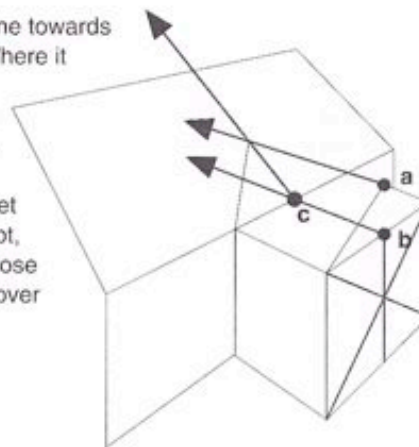
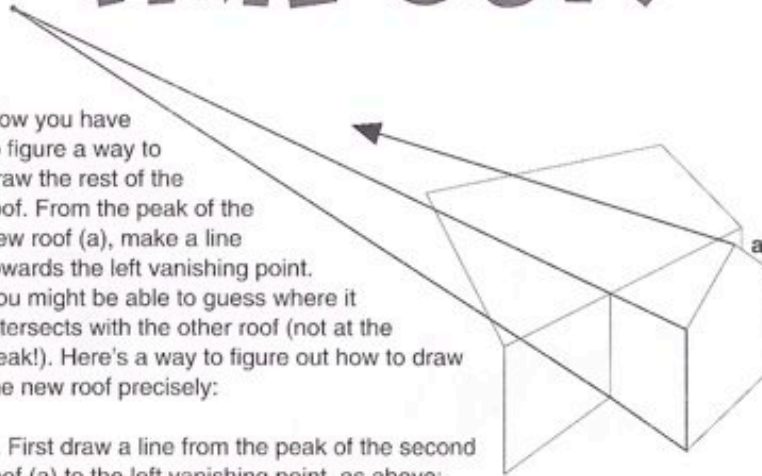
As with the peak of the first roof, I'm using an "X" to find the center of the wall, and extending it upwards to the peak. You can decide how high you want this one to be.

# TIME OUT!

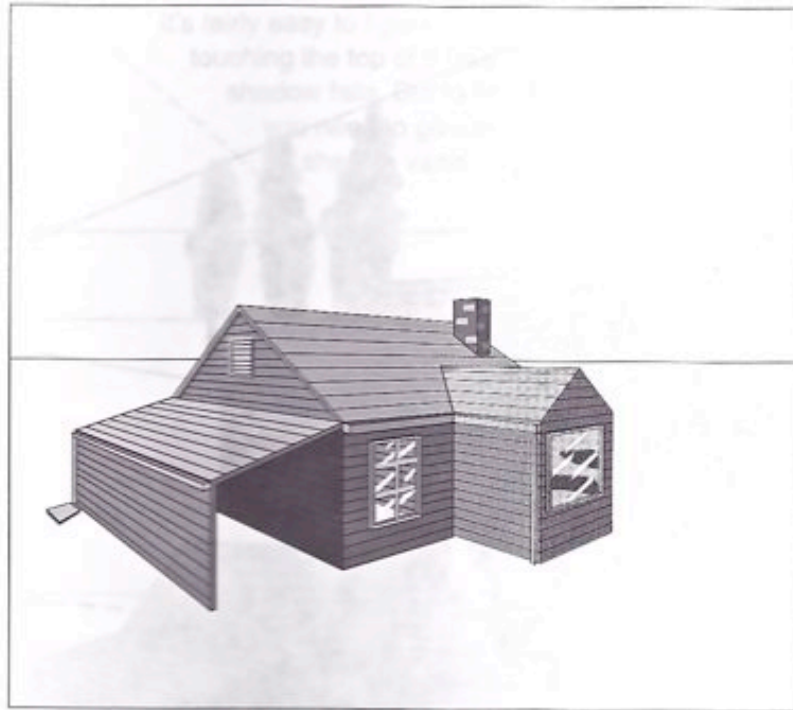
Now you have to figure a way to draw the rest of the roof. From the peak of the new roof (a), make a line towards the left vanishing point. You might be able to guess where it intersects with the other roof (not at the peak!). Here's a way to figure out how to draw the new roof precisely:

1. First draw a line from the peak of the second roof (a) to the left vanishing point, as above;
2. Next, draw a line from the middle of the top of the outside wall of the addition (b) towards the left vanishing point;
3. Find the point where that line meets the wall of the house (c);

4. From point (c), draw a line towards the roof vanishing point. Where it crosses the first line (Step 1) marks the point where the two roofs meet. Connect that with the corner where the walls meet and you're all done! (Except, of course, for erasing all those extra guide lines going all over the place!)



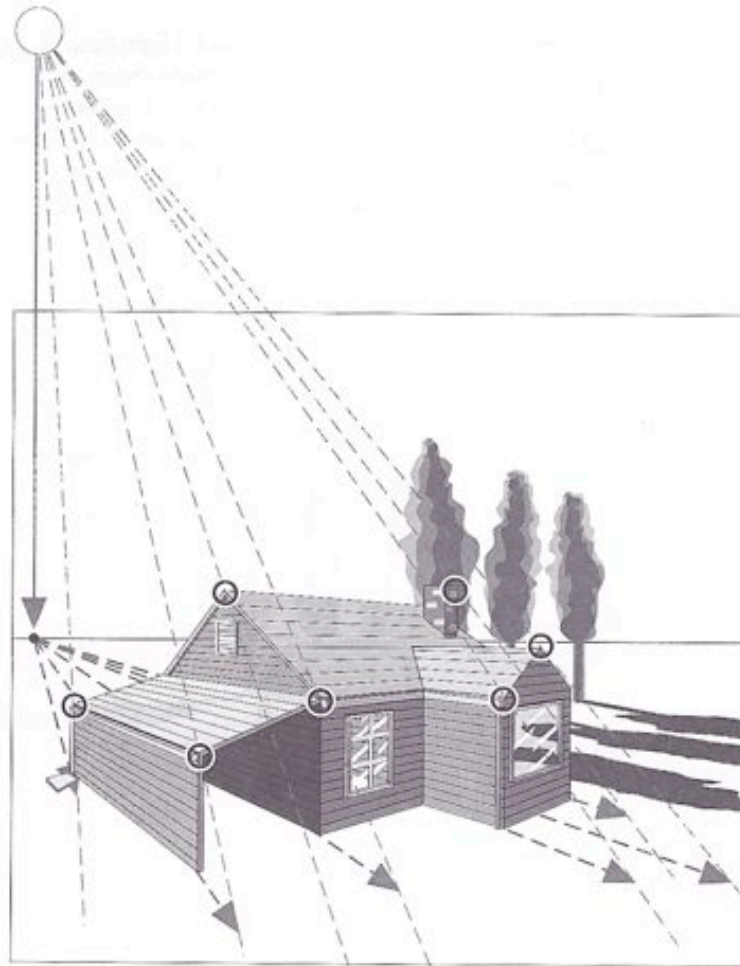
## TWO-POINT PERSPECTIVE



If you managed to get that second addition built on the house (or even if you didn't), you'll probably want to add some details like doors and windows, gutters, and perhaps a chimney. Take care to line up anything horizontal on the building with one of the two vanishing points, and remember that vertical lines are always vertical in this drawing.

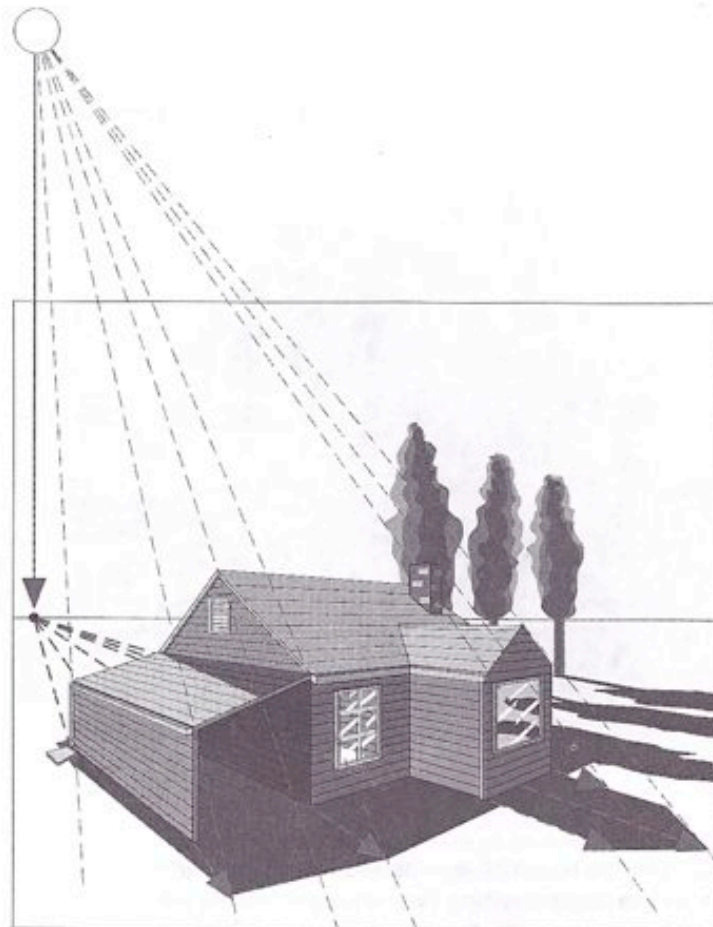
The next step is to add shadows, because shadows help create depth. Shadows in your drawing don't have to be perfect—they just have to look good! In the next few pages, we'll see how to draw shadows for this house, using the rules.

## TWO-POINT PERSPECTIVE



Here's how the same principle works with the high points of the house. The circles show points on the house that may appear in the shadow on the ground—corners, peaks, and edges. As before, a line from the shadow vanishing point, through the point on the ground directly below circled point on the house, intersects the ray from the sun exactly where the shadow should stop.

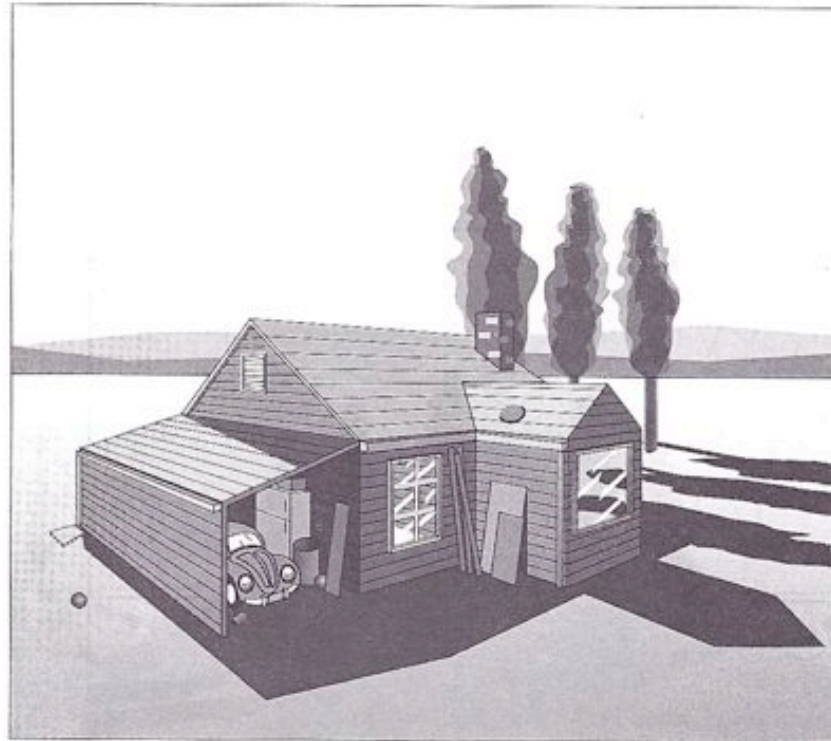
## TWO-POINT PERSPECTIVE



Not all of the points may show up when the shadow is complete. Adding the shadow then becomes a game of connect-the-dots. If you already have a pretty good idea what the shadow should look like, you might try drawing them without all this fuss. You can always use this technique when you want to be more precise. But most pictures won't need to be entirely precise, since few people really study the shadows!

At this point, get rid of those guide lines. Take a deep breath and look at your picture. How does it look? Do you sense there's something still missing? Something like...

## TWO-POINT PERSPECTIVE



...**stuff** around the house? I've remedied that situation in this drawing. Notice how everything I've added still follows the rules of perspective—the boards, the old refrigerator in the garage...when you make a 3-D drawing, be sure all the details work together to create the illusion of depth.

## TWO-POINT PERSPECTIVE



As you practice perspective drawing, you'll find it helpful to use photos—perhaps from a book or magazine. Try drawing this house—and try it *without* tracing. Tracing is a useful way to transfer the basics of an image, but right now your eye needs practice—so draw this by looking at it only. Want some hints?

- 1) First locate the horizon—near the floor of the front porch.
- 2) Draw your verticals—very lightly, of course!
- 3) Locate approximate vanishing points.
- 4) Actually lay your pencil or ruler on top of the photo, vertically or horizontally, to compare angles as you draw.

I've chosen this Victorian house because it has such great details. When you draw a house like this, those details attract the viewer's attention—this means the viewer probably won't notice (or be bothered) if your perspective is a little off. Even if your perspective is off by a lot, don't give up! Add lots of detail, and carefully color the house as brightly as possible. No one but you will even notice the perspective!