

Because the whole point of a scaled drawing is to be able to take accurate measurements directly off your printout, views with perspective don't work.

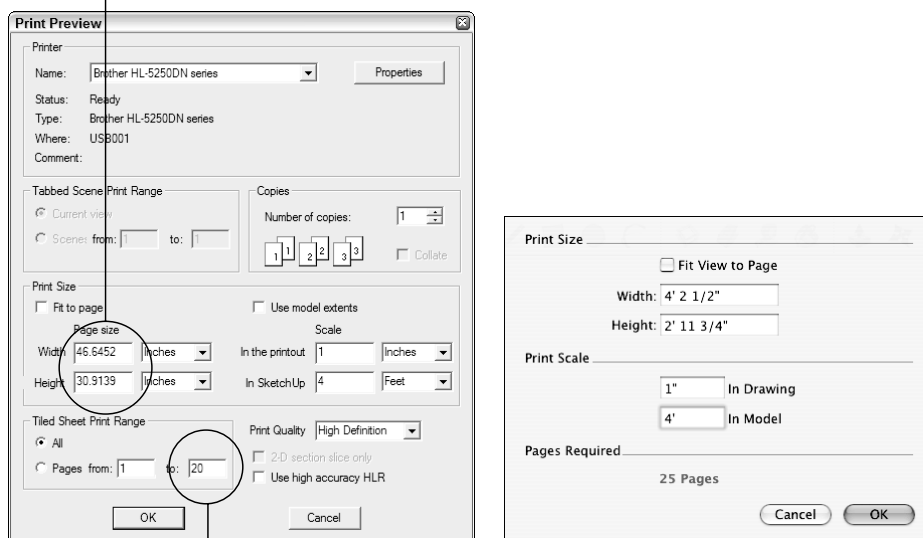
- ✓ **Switch to Parallel Projection if you want to print to scale.** I know, I know — this is the same as the last point. But it's important enough that I figure it's worth mentioning twice. To change your viewing mode from Perspective to Parallel Projection, choose Camera → Parallel Projection. That's all there is to it.
- ✓ **You have to use the Standard views.** SketchUp lets you quickly look at your model from the top, bottom, and sides by switching to one of the Standard views. Choose Camera → Standard and pick any of the views except Iso.

Printing to scale (Windows and Mac)

The steps in this section allow you to produce a scaled print from SketchUp; I give Windows instructions first, and then Mac. When the user-interface elements are different for the two platforms, the ones for Mac are shown in parentheses. Figure 12-8 shows the relevant dialog boxes for printing to scale in Windows and on a Mac.

When printing to scale, don't worry about these numbers.

Figure 12-8:
Setting up to
print at 1
inch = 4 foot
(1/4 inch = 1
foot) scale.



To print at 1 inch = 4 feet, you'll need 20 pages

Wrapping your head around scale

When you print to scale, anyone with a special ruler (called a *scale*, confusingly enough) can take measurements from your drawing, as long as he or she knows the scale at which it was printed. You can use three different kinds of drawing scales:

Architectural: In the United States, most people use feet and inches to measure objects. Most architectural scales substitute fractions of an inch for a foot. Three common examples of architectural scales are:

- ✓ ½ inch = 1 foot (1 inch = 2 feet)
- ✓ ¼ inch = 1 foot (1 inch = 4 feet)
- ✓ ⅛ inch = 1 foot (1 inch = 8 feet)

Engineering: When it comes to measuring big things like parcels of land and college campuses, U.S. architects, engineers, and surveyors still use feet, but they use engineering scales instead of architectural ones. Three common engineering scales are:

- ✓ 1 inch = 20 feet
- ✓ 1 inch = 50 feet

- ✓ 1 inch = 100 feet

Metric: Outside of the United States, virtually everyone uses the metric system. Because all measurement is based on the number 10, metric scales can be applied to everything from very small things (blood cells) to very big things (countries). Metric scales use ratios instead of units of measure; here are three examples:

- ✓ 1:10 (the objects in the drawing are 10 times bigger in real life)
- ✓ 1:100 (the objects in the drawing are 100 times bigger in real life)
- ✓ 10:1 (the objects in the drawing are 10 times smaller in real life)

The following figure shows the same drawing printed at two different scales.



1 inch = 8 feet



1 inch = 16 feet



Before you begin, make sure that you've switched to Parallel Projection and that your view is lined up the right way. See the previous section of this chapter for the lowdown on what you need to do to prepare your model view for scaled printing. Follow these steps to produce a scaled print:

1. Choose **File** ⇨ **Print Setup (Page Setup)**.
2. Select a printer, paper size, and paper orientation, and then click the **OK** button.
3. Choose **File** ⇨ **Print Preview (Document Setup)**.

4. **Deselect the Fit to Page (Fit View to Page) check box.**

5. **Make sure that the Use Model Extents check box is deselected.**

Mac users don't have this option, so there's nothing to worry about.

6. **Enter the scale at which you'd like to print your model view.**

If I wanted to print a drawing at $\frac{1}{4}$ -inch scale, I would enter the following:

- **1 Inches** into the In the Printout (In Drawing) box
- **4 Feet** into the In SketchUp (In Model) box

If I wanted to produce a print at 1:100 scale, I would enter the following:

- **1 m** into the In the Printout (In Drawing) box
- **100 m** into the In SketchUp (In Model) box

7. **Take note of how many pages you'll need to print your drawing.**

If you're using Windows, you can check this in the Tiled Sheet Print Range area of the dialog box. On a Mac, the number of pages you'll need appears in the Pages Required section of the Document Setup dialog box. If you want to print on a different-sized piece of paper, change the setting in the Print Setup (Page Setup) dialog box.

8. **If you want to print your drawing on a single sheet and it won't fit, try using a smaller scale.**

Using the $\frac{1}{4}$ inch = 1 foot example, try shrinking the drawing to $\frac{3}{16}$ inch = 1 foot scale. To do this, you would enter the following:

- **3 Inches** into the In the Printout (In Drawing) box
- **16 Feet** into the In SketchUp (In Model) box

9. **When you're happy with how your drawing will print, click the OK button.**

10. **(Windows only) If you like what you see in the Print Preview window, click the Print button (in the upper-left corner) to open the Print dialog box.**

11. **(Mac only) Choose File⇧Print.**

12. **In the Print dialog box, click the OK button to send your print job to the printer.**



Refer to the "Making a basic print" section for your operating system, earlier in the chapter, for the whole story on basic printing from SketchUp.