Examples:

1) The St. Monica Family Center installed a tile floor in its Lower Lounge. The tiles measure 1 foot on each side. The floor of the Lower Lounge is a rectangle with a length of 27 feet. If exactly 594 tiles were used, what is the width of the floor of the room?

2) The area of a triangle is 157.5 $m^2$. Its base is 21 m. What is the height of the triangle?

3) A trapezoid has an area of 56 $cm^2$. The length of $b_1$ is 11 cm, and its height is 4 cm. What is the length of $b_2$?

Wrap Up:
How does drawing/labeling a diagram help?
**HW: Missing Dimension in Area Worksheet**

Solve the following problems on notebook paper. Show all of your work and circle your answers. Answer in complete sentences where appropriate.

1) Determine the height of a triangle when the area is 570 cm² and its base is 30 cm.

2) The area of a parallelogram is 306.25 in². Its base is 17.5 inches. What is its height?

3) The area of a triangular stained glass window is 0.315 m². The base of the window measures 0.7 m. What is its height?

4) A lamp with a circular base of 14 cm in diameter is on a square mat with an area of 196 cm². What is the area of the mat uncovered?

5) A Bearet Banner that covers 91 square meters has a length of 15 meters. What is its width?

6) Find the height of a triangle if its area is 64.8 cm² and its base is 15 cm.

7) A parking lot has the shape of a rectangle. It has an area of 960 square meters. If cars parked side by side across the length of the lot occupy 120 meters, how wide is the lot?

8) A radio station broadcasts to a circular area of 1256 square kilometers. How far is each direction from the station does the broadcast reach?

9) Triangle: \( A = 215.14 \) cm², \( b = 54.7 \) cm, \( h = ? \)

10) Trapezoid: \( A = 39 \) in², \( h = 6 \) in, \( b_1 = 4 \) in, \( b_2 = ? \)

11) Trapezoid: \( A = 54 \) yd², \( h = 6 \) yd, \( b_2 = 9 \) feet, \( b_1 = ? \)

12) Kim made a square out of piece of wire. The square has sides of length 6 inches. If she uses the same piece of wire to form a circle, what is will be the area of the circle?

**Key: x \approx 8 points each**

1) 38 cm
2) 17.5 in
3) The window's height is 0.9 m.
4) The uncovered area is about 42.14 cm².
5) The banner's width is 7 m.
6) The height is 7.2 cm.
7) The lot is 8 m wide.
8) The station broadcasts about 20 in all directions.
9) 12.4 cm
10) 9 in
11) 15 yd
12) The area of the circle will be about 45.3 inches².