Solving Word Problems by Factoring A

Name:_____   Period:_____

Directions: Solve each word problem by setting up an equation and solving. **Show all work.** Don't forget to answer the question with a complete sentence.

1. A board of wood has a width that is 8 cm more than its length. Its area is 273 cm². What are the board's dimensions?

2. A poster's height is 24 cm longer than it width. Its area is 576 cm². What are the dimensions of the poster?

3. The length of a rug is 3 times the width plus 9 in. The area of the rug is 1380 in². What are the dimensions of the rug?

4. The length of a room is 6 ft shorter than the width. The area of the room is 216 square ft. What are the dimensions of the room?

5. The height of the front of a building is twice the width minus 8 meters. The area of the front of the building is 384 m². What are the dimensions of the front of the building?

6. The width of a towel is twice the length plus 12 cm. The area of the towel is 3680 square cm. What are the dimensions of the towel?

7. The length of a rug is 3 times the width plus 6 cm. The area of the rug is 5040 square cm. What are the dimensions of the rug?

8. The length of a hallway is 6 times the width plus 12 m. The area of the hallway is 210 m². What are the dimensions of the hallway?