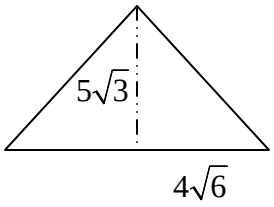
Name: _____ Math A Period: _____

Radicals – Word Problems Area-Perimeter Date: _____

1. The length of a rectangle is $2\sqrt{48}$, and the width is $6\sqrt{3}$. Express in simplest form:
   a. The area of the rectangle
   b. The perimeter of the rectangle?

2. If a square has a side of $\sqrt{5}$, what is the area and perimeter of the rectangle in simplest radical form?

3. Express the area of the figure in simplest radical form:



4. A ladder is leaning against a building 14 feet from the ground. If the ladder is placed 7 feet from the bottom of the building, how long is the ladder in simplest radical form?

5. If the area of a rectangle is $20\sqrt{50}$ and the length is $4\sqrt{2}$, what is the width?

6. If the perimeter of a rectangle is $12\sqrt{3}$ and the length is $2\sqrt{12}$, what is the width?

7. The area of a parallelogram is $8\sqrt{90}$ and the base is $2\sqrt{5}$. What is the height of the parallelogram?

8. TV's and Picture frames are sometimes measured by the length of the diagonal. If Melissa bought a square picture frame with a diagonal length of 10", how long is one of the sides? If Melissa wants to put the picture frame in a space which measures 7", will she have enough room?

9. Can 2, 9, and 10 be actual sides of a right triangle? Be sure to show mathematical proof to support your answer.