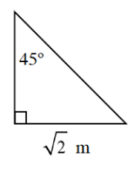
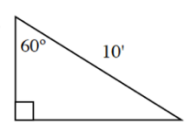


Name _____

Period _____ Date _____

Homework 6.1.1

1) For each triangle below, use right triangle patterns to determine the missing side lengths. Then calculate the area and perimeter of each triangle.

| | |
|--|---|
| <p>a.</p>  <p style="text-align: center;">$\sqrt{2}$ m</p> <p>Perimeter: _____ Area: _____</p> | <p>b.</p>  <p style="text-align: center;">10'</p> <p>Perimeter: _____ Area: _____</p> |
|--|---|

2) Follow the instructions on the printed Notes to rationalize the denominator in each expression below

| | | |
|---|--|---|
| <p>a) $\frac{4}{\sqrt{2}}$</p> | <p>b) $\frac{8}{\sqrt{20}}$</p> | <p>c) $\frac{2\sqrt{3}}{\sqrt{6}}$</p> |
|---|--|---|

3) Solve the quadratic equation below twice, once using the Zero Product Property and once using the Quadratic Formula. Verify that the solutions from both methods are the same.

| | |
|--|---|
| <p>Quadratic Formula</p> <p>a. $2x^2 - 19x + 9 = 0$</p> | <p>Zero Product Property (factor)</p> <p>b. $2x^2 - 19x + 9 = 0$</p> |
|--|---|

4) Rewrite each formula as indicated below.

a. The distance an object has fallen under the force of gravity (g) is given by the formula $d = \frac{1}{2}gt^2$. Solve this formula for time, t .

b. The area of a circle, A , is given by the formula $A = \pi r^2$. Solve this formula for the radius, r .

5) Determine whether or not the two triangles below are similar. If so, create a flowchart to show your reasoning. If not, explain why not.

