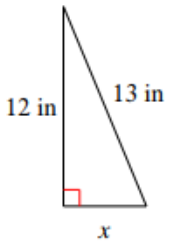
Pythagorean Theorem

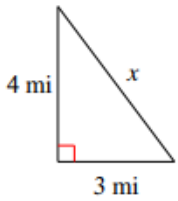
Period_____ Name_____

Find the missing side of each triangle. Round your answers to the nearest tenth if necessary.

1)



2)



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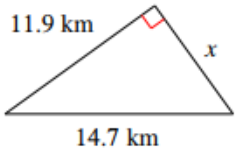

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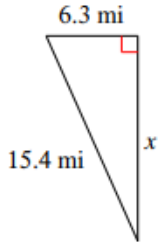
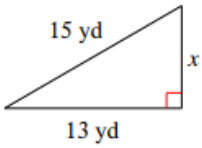
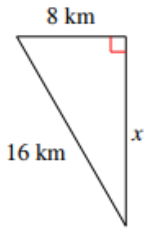


Find the missing side of each triangle. Leave your answers in simplest radical form.

5)



6)



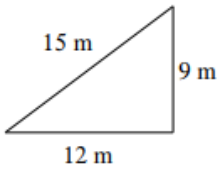
The lengths of two sides of a right triangle are given. Find the possible lengths of the third side. Note that since you don't know if the missing side is the hypotenuse or a leg, you'll have to find two different lengths for each problem.

7) 10 inches and 6 inches

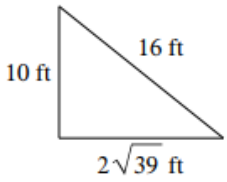
8) 23 cm and 40 cm

State if each triangle is a right triangle.

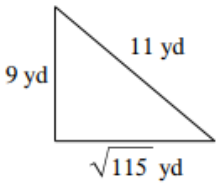
9)



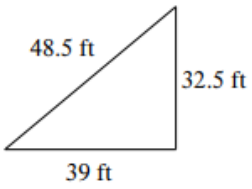
10)



11)

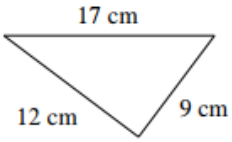


12)

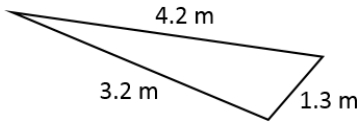


Consider the obtuse triangles below. Plug their lengths into the Pythagorean Theorem. Notice that $a^2 + b^2 \neq c^2$.

13)



14)



15) Use the examples of problems 13 and 14 to draft a rule for <u>all</u> obtuse triangles involving $a^2, b^2, and\ c^2$.

16) Use your answer from problem 15 to draft a rule for all <u>acute</u> triangles involving $a^2, b^2, and\ c^2$.

17) Test out your rule from problem 16 on the acute triangle below.