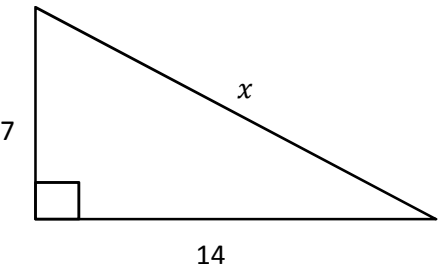
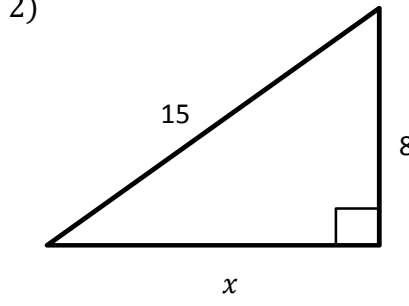
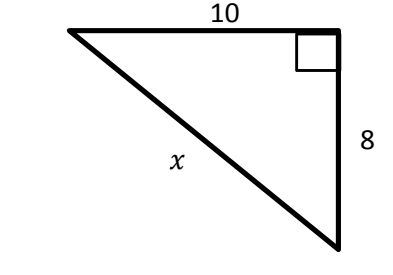
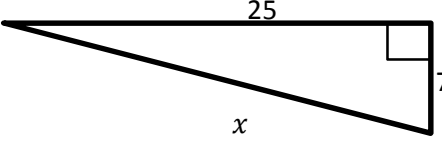
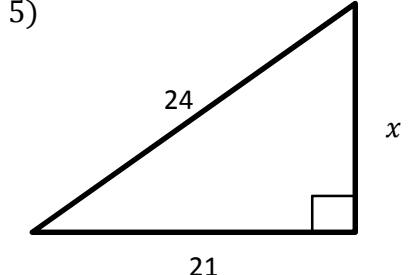
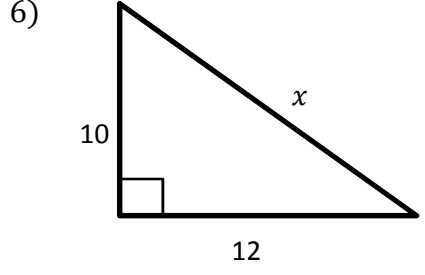
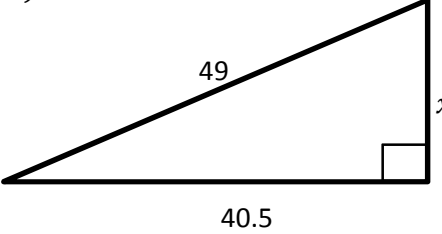
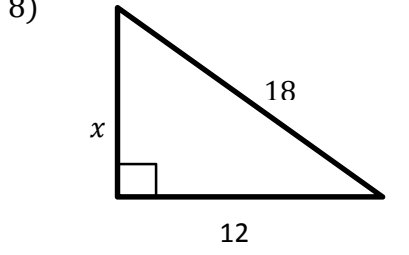
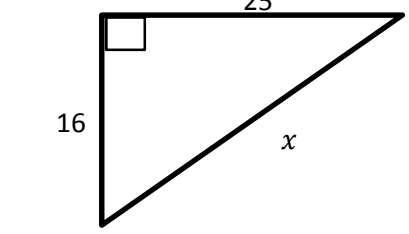


Unit 6: Geometry Day 3

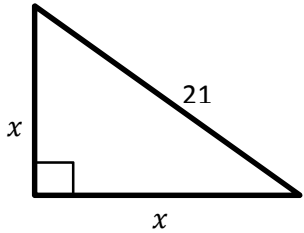
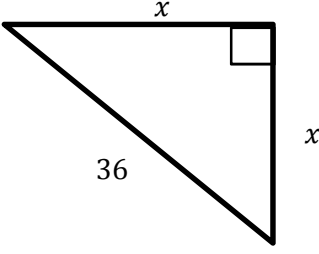
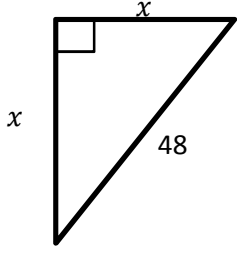
Math 9 Principles

6-3 I can use the Pythagorean Theorem to solve for missing sides in right angled triangles.

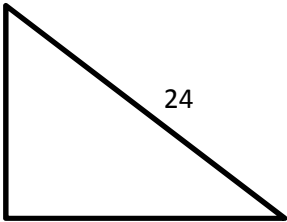
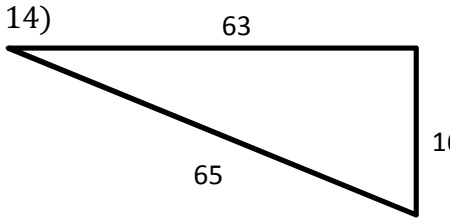
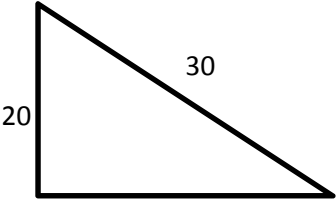
Solve for the indicated missing side lengths. Use "Sum of Squares" or "Difference of Squares."
Round to one decimal place where necessary. Show your work.

<p>1)</p>  <p>A right-angled triangle with a vertical leg of length 7, a horizontal leg of length 14, and a hypotenuse of length x. The right angle is at the bottom-left corner.</p>	<p>2)</p>  <p>A right-angled triangle with a hypotenuse of length 15, a vertical leg of length 8, and a horizontal leg of length x. The right angle is at the bottom-right corner.</p>	<p>3)</p>  <p>A right-angled triangle with a horizontal leg of length 10, a vertical leg of length 8, and a hypotenuse of length x. The right angle is at the top-right corner.</p>
<p>4)</p>  <p>A right-angled triangle with a horizontal leg of length 25, a vertical leg of length 7, and a hypotenuse of length x. The right angle is at the top-right corner.</p>	<p>5)</p>  <p>A right-angled triangle with a hypotenuse of length 24, a horizontal leg of length 21, and a vertical leg of length x. The right angle is at the bottom-right corner.</p>	<p>6)</p>  <p>A right-angled triangle with a vertical leg of length 10, a horizontal leg of length 12, and a hypotenuse of length x. The right angle is at the bottom-left corner.</p>
<p>7)</p>  <p>A right-angled triangle with a hypotenuse of length 49, a horizontal leg of length 40.5, and a vertical leg of length x. The right angle is at the bottom-right corner.</p>	<p>8)</p>  <p>A right-angled triangle with a hypotenuse of length 18, a horizontal leg of length 12, and a vertical leg of length x. The right angle is at the bottom-left corner.</p>	<p>9)</p>  <p>A right-angled triangle with a horizontal leg of length 25, a vertical leg of length 16, and a hypotenuse of length x. The right angle is at the top-left corner.</p>

Solve for the indicated side length using the $2x^2$ version of the Pythagorean formula.

10) 	11) 	12) 
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Determine whether or not these are right angled triangles. (show all work)

13) 	14) 	15) 
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Solve using the Pythagorean Theorem. Sketch each equation yourself, label the dimensions, and solve.

16) A screen's size is usually stated in terms of its diagonal length. Assuming the screen is square, find its size if it is stated as 180 cm.

17) From point A, travel 10 km east then travel 3 km south, turn west and travel 12 km. How far are you from point A?

18) If the distance between bases in baseball is 90 ft, how far is it from home plate directly to second base?

19) A 20 foot ramp rises to a doorway that is 3 feet off the ground. How far away from the building is the ramp?

20) Find the side length of the largest square that can fit inside a circle of diameter 10.

21) From point A, travel 12 km south and 10 km west. Then travel 5 km north. How far are you from point A?

22) A rectangle is 40 units long and 15 units wide. Find the length of its diagonal.

23) Find the side length of the largest square you can fit inside a circle with radius 32.

24) How high up a wall does a 16 ft. ladder reach if the bottom is 6 ft. from the base of the wall?

25) A ship travels 30 km west, then turns south and travels 15 km. How far is it from its original position? (Measured in a straight line)

26) If the hypotenuse is 34 and one other side of a right triangle is 16, find the length of the third side of the triangle.