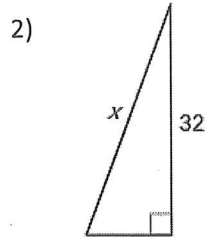
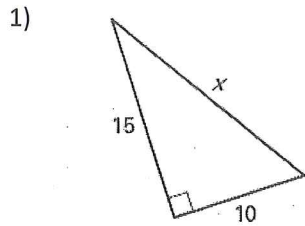
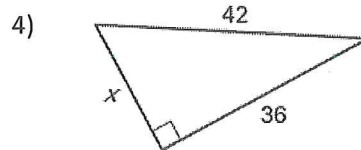
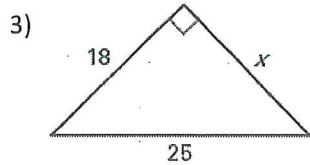


Worksheet 10.1

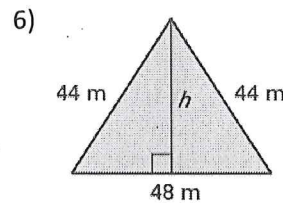
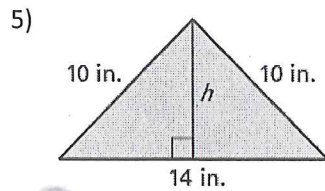
Find the length of the hypotenuse, leave answer in simplest radical form.



Find the unknown leg length, leave answer in simplest radical form.



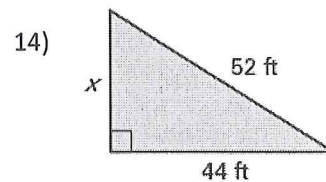
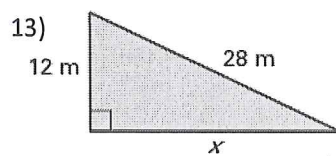
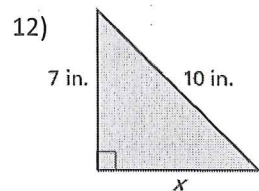
Find the area of the isosceles triangle in simplest radical form.



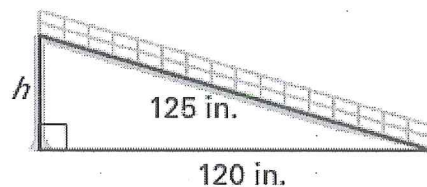
The given lengths are two sides of a right triangle. All three side lengths of the triangle are integers and together form a Pythagorean triple. Find the length of the third side and tell whether it is a leg or the hypotenuse.

- 7) 24 and 32      8) 24 and 45      9) 40 and 85      10) 49 and 168      11) 72 and 78

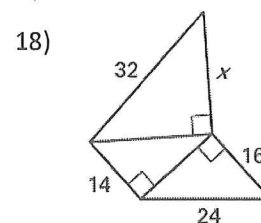
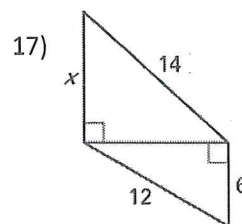
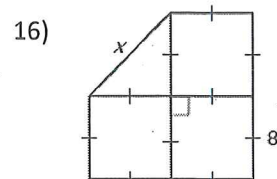
Find the area of the right triangle. Write your answer in simplest radical form.



15) A shipping dock has a mobile ramp that is used to help load and unload cargo from trucks. The ramp is 125 inches long and has a base that is 120 inches long. What is the height  $h$  of the ramp?



Challenge, Find the value of  $x$  for each

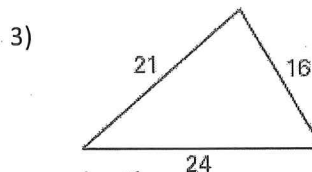
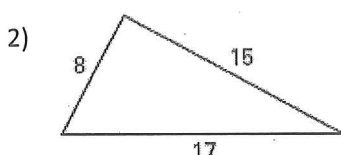
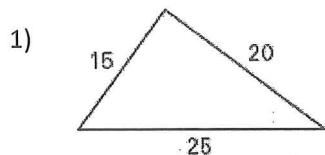


### 10.1 Part 2 Converse of Pythagorean Theorem

Name \_\_\_\_\_

Do Work on own sheet of paper.

Tell whether the triangle is a right triangle. If not a right triangle, then what kind?

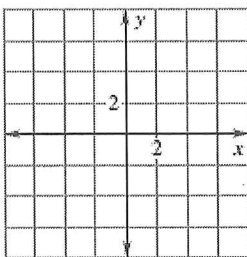


Decide whether the numbers can represent the side lengths of a triangle. If they can, classify the triangle as *acute*, *right*, or *obtuse*.

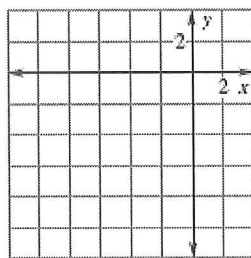
- 4) 6, 8, 10      5) 5, 7, 9      6) 8, 9, 10      7) 10, 12, 30      8) 16, 30, 34  
 9) 18, 34, 45      10)  $\sqrt{8}$ , 4, 6      11) 20, 21, 28      12)  $\sqrt{13}$ , 10, 12      13) 14, 48, 50

Graph points A, B, and C. Connect the points to form  $\triangle ABC$ . Decide whether  $\triangle ABC$  is *right*, *acute*, or *obtuse*.

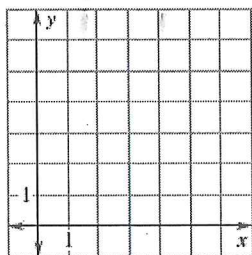
- 14)  $A(-3, 5), B(0, -2), C(4, 1)$



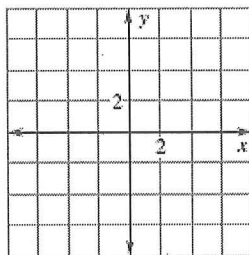
- 15)  $A(-8, -4), B(-5, -2), C(-1, -7)$



- 16)  $A(0, 5), B(3, 6), C(5, 1)$



- 17)  $A(-2, 4), B(2, 0), C(5, 2)$



The sides and classification of a triangle are given below. The length of the longest side is the integer given. What value(s) of  $x$  make the triangle?

- 20)  $x, x, 8$ ; right      21)  $x, x, 12$ ; obtuse      22)  $x, x, 6$ ; acute  
 23)  $x, x, 16$ ; right      24)  $x, x, 10$ ; obtuse      25)  $x, x, 15$ ; acute

**Maps** The distances between three towns are given in the diagram.

- 26) Is the triangle ( $\triangle ABC$ ) formed by the three towns a right triangle?

- 27) Town B is directly west of town C. Is town A directly north of town C?

