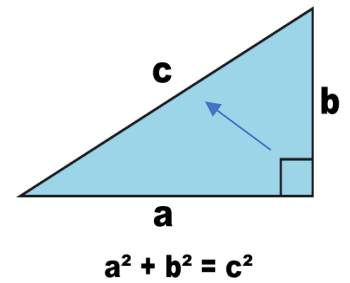
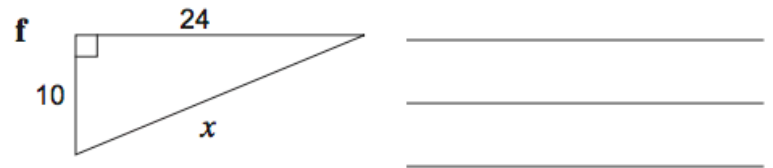
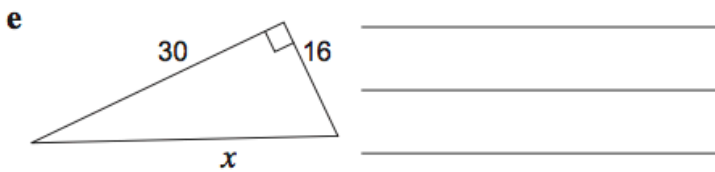
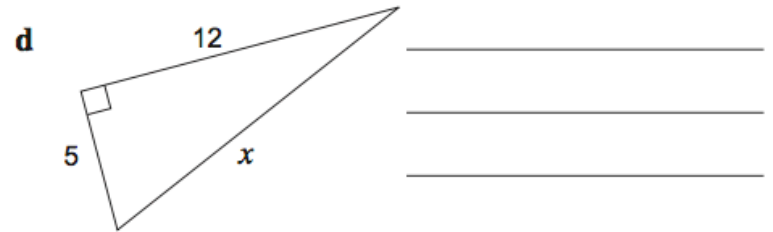
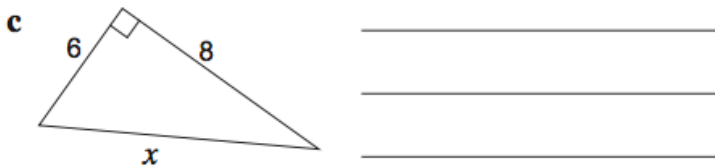
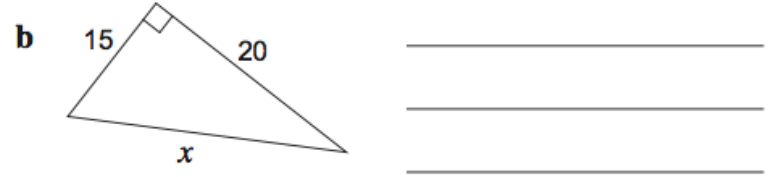
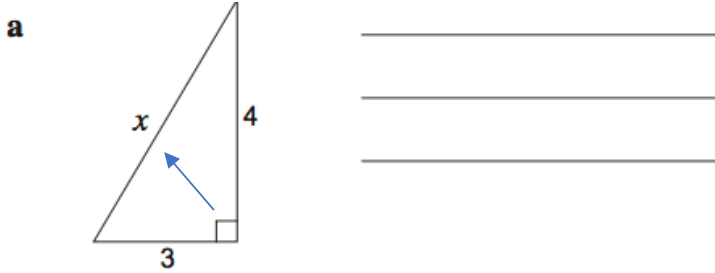


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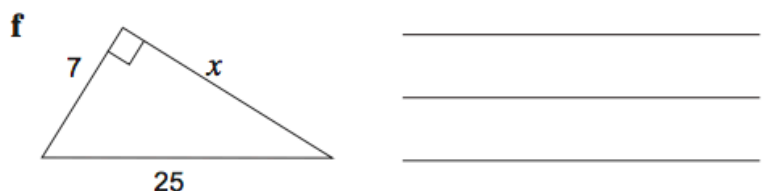
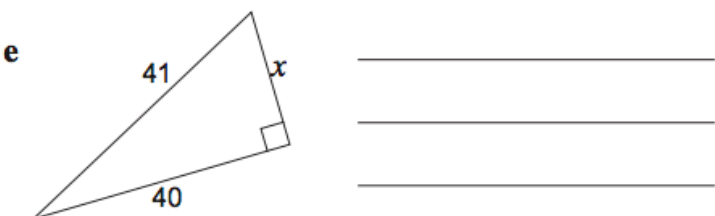
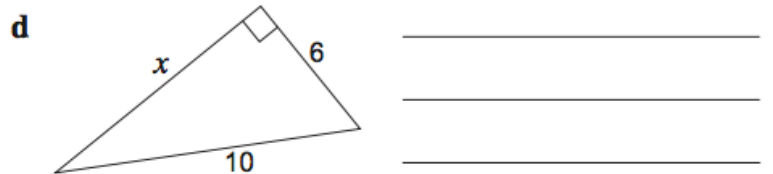
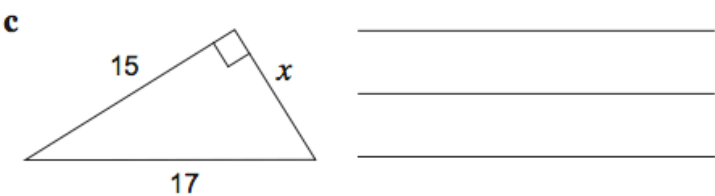
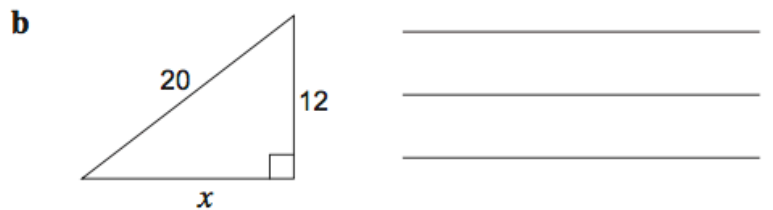
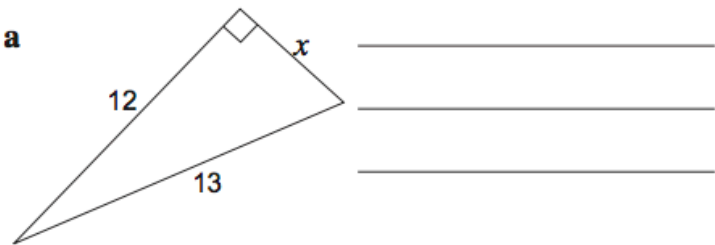
4.29.19 (Pythagorean Theorem) Due: Friday 5/3/19



**QUESTION 1** Find the length of the hypotenuse in each of the following.



**QUESTION 2** In the following triangles, find the length of the unknown sides.



# Key Idea

Example:  $\{7, 24, 25\} \rightarrow$  Use  $a = 7$ ,  $b = 24$ ,  $c = 25$  to determine if the numbers can be used with the Pythagorean Theorem successfully.

A **Pythagorean triple** is a set of three positive integers  $a$ ,  $b$ , and  $c$  where  $a^2 + b^2 = c^2$ .

Is  $\{7, 24, 25\}$  a Pythagorean Triple?  $\rightarrow$  **Does**  $7^2 + 24^2 = 25^2$ ?  
 $49 + 576 = 625$ , so  $\{7, 24, 25\}$  is a Pythagorean Triple. YES

**QUESTION 3** Determine if each of the sets below represent Pythagorean Triples.

**a**  $\{2, 4, 6\}$

\_\_\_\_\_

\_\_\_\_\_

**b**  $\{9, 12, 15\}$

\_\_\_\_\_

\_\_\_\_\_

**c**  $\{9, 40, 41\}$

\_\_\_\_\_

\_\_\_\_\_

**d**  $\{4, 6, 10\}$

\_\_\_\_\_

\_\_\_\_\_

**e**  $\{3, 4, 5\}$

\_\_\_\_\_

\_\_\_\_\_

**f**  $\{8, 13, 17\}$

\_\_\_\_\_

\_\_\_\_\_

**g**  $\{8, 10, 12\}$

\_\_\_\_\_

\_\_\_\_\_

**h**  $\{19, 40, 41\}$

\_\_\_\_\_

\_\_\_\_\_

**i**  $\{6, 8, 10\}$

\_\_\_\_\_

\_\_\_\_\_

**j**  $\{5, 12, 13\}$

\_\_\_\_\_

\_\_\_\_\_

**k**  $\{15, 36, 39\}$

\_\_\_\_\_

\_\_\_\_\_

**l**  $\{8, 15, 17\}$

\_\_\_\_\_

\_\_\_\_\_

**Find the distance  $d$ . Round your answer to the nearest tenth.**

$\rightarrow$  *Hint: Construct a right triangle and let  $d$  be the hypotenuse.*

