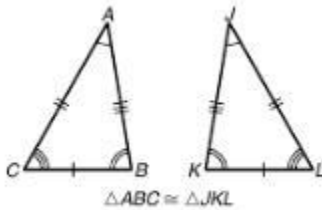




Lesson 11: Right Triangles The Pythagorean Theorem Bellringer



1. (2 points) Given the two congruent triangles below, fill in the table with the appropriate angle and side relations.



Corresponding Parts	
Congruent Angles	Congruent Sides
$\angle A \cong$.	$\overline{AB} \cong$.
$\angle B \cong$.	$\overline{BC} \cong$.
$\angle C \cong$.	$\overline{CA} \cong$.

2. (1 point) If line segment $AB = 3$ cm, what is the value line segment JK?

Lesson 11: Right Triangles The Pythagorean Theorem Notes

Let's Think:

What is the difference in the two expressions below?

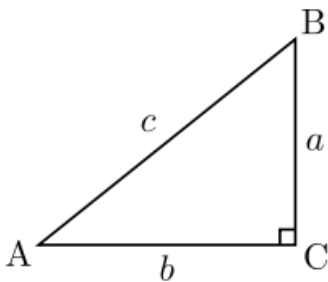
$3 * 2$

3^2

Other than matching up corresponding parts of congruent triangles, we can also find missing sides of a **right triangle** by using the Pythagorean Theorem!

$$a^2 + b^2 = c^2$$

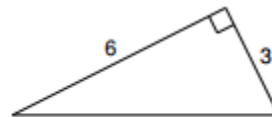
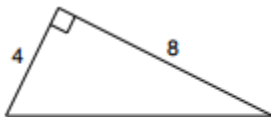
Parts of a right triangle:



Square Root:

Example 1 & 2:

Use the Pythagorean Theorem to find the missing side of each right triangle below:



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Example 3:

Draw and label a right triangle using the given information:

“The two legs measure 3 cm and 4 cm. The hypotenuse measures 5 cm.”

Example 4:

Is the following a right triangle? How do you know? Draw a picture to help you.

$$a = 3, b = 5, c = 7$$

Example 5:

Using the Pythagorean Theorem given one leg and the hypotenuse.

$$a = 6, b = x, c = 10$$



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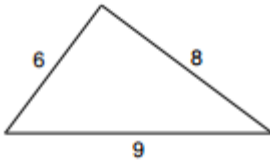
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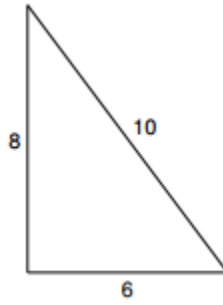
Homework:

Questions 1-3, determine if the following lengths form a right triangle. Justify your answer.

1)



2)

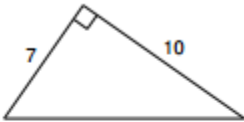


3)

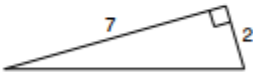
$a = 6.4, b = 12, c = 12.2$

Questions 4 – 9 use the Pythagorean Theorem to find the missing side of each right triangle below:

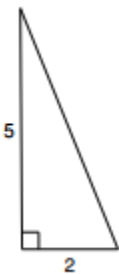
9)



11)



13)



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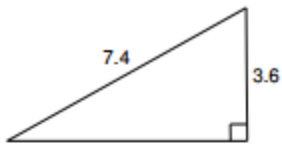
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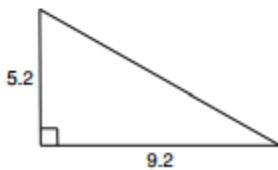
15)



17)



19)

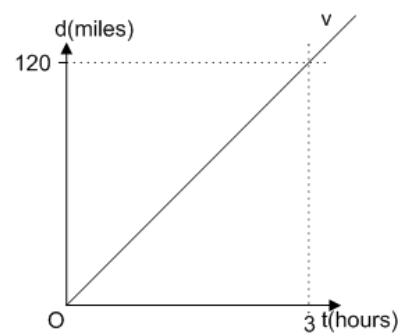


Review:

10. Question 1: Half a pound of flour is poured into a jar. If the flour occupies two fifths of the jar, what quantity of flour could be stored in the jar?

- 0.5 pounds
- 0.75 pounds
- 1 pound
- 1.25 pounds

11. Line v in the coordinate graph below represents the distance in time travelled by a vehicle. What is the distance travelled after 75 minutes?



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Period: _____



Lesson 11: Right Triangles The Pythagorean Theorem Exit Ticket



(2 points)

Use the Pythagorean Theorem to find the missing side of the triangle below:

