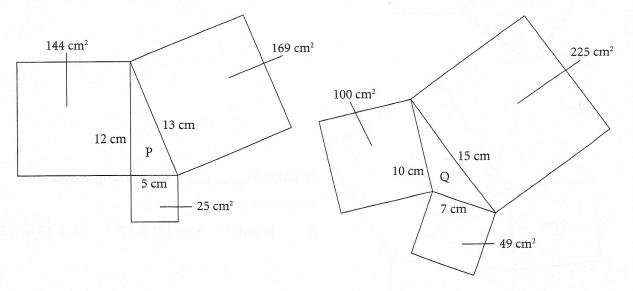
Quick Review



- ➤ The Pythagorean Theorem is true for right triangles only.
- To see which triangle is a right triangle, check to see if the area of the square on the longest side is equal to the sum of the areas of the squares on the other two sides.

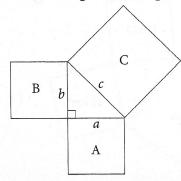


$$25 \text{ cm}^2 + 144 \text{ cm}^2 = 169 \text{ cm}^2$$

$$49 \text{ cm}^2 + 100 \text{ cm}^2 \neq 225 \text{ cm}^2$$

The Pythagorean Theorem applies to triangle P, but not to triangle Q.

- ➤ A set of three whole numbers that satisfy the Pythagorean Theorem is called a Pythagorean triple. For example, 5-12-13 is a Pythagorean triple because $5^2 + 12^2 = 13^2$
- ➤ For a right triangle: area of square on the longest side (square C) = area of square A + area of square B



➤ For a Pythagorean triple *a-b-c*:

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

Practice

1. Fill in the blanks from the list of choices to make the sentence true.

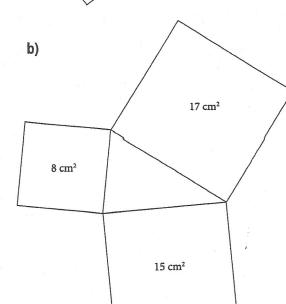
a) - 36 m² 6 m 100 m² - 64 m² 10 m 8 m

Triangle X _____ a right triangle because

is is not

 $6 + 8 \neq 10$

100 = 64 + 36

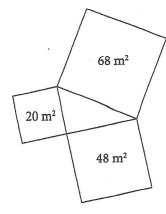


Triangle Y _____ a right triangle because

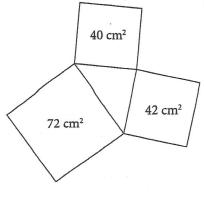
is is not $8^2 + 15^2 = 17^2$ $8 + 15 \neq 17$

2. Which of the following triangles are right triangles? Explain.

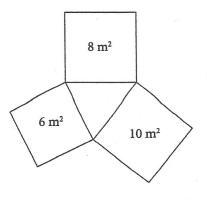
a)



b)



c)



3.	Determine whether the triangle with each set of side lengths is a right triangle. Justify your answer.
	a) 20 cm, 30 cm, 40 cm cm² + cm² = cm² cm² = cm² The triangle a right triangle because
	c) 20 m, 21 m, 29 m d) 60 cm, 11 cm, 62 cm
4.	Fill in the blanks to make the sentence true.
	The set of numbers 7, 24, 25 is a Pythagorean triple because + =
5.	Which of these sets of numbers are Pythagorean triples? Explain.
	a) 10, 50, 60 This a Pythagorean triple because 10 ² + 50 ² 60 ² b) 12, 35, 37
6.	Two numbers of a Pythagorean triple are given. Find the missing number. The numbers ar listed in ascending order. a) 7, 24,
	The missing number is the of the sum of the of the first two numbers.
	Substitute for 4 and 5.
	b) 16, 30,, 26
7.	Doug wants to check that a lawn he is planting is a rectangle. He measures the width of the lawn to be 10 m, the length to be 24 m, and the diagonal to be 26 m. Is the lawn a rectangle? Explain. If the lawn is a rectangle, then the width, length, and diagonal form a triangle.
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