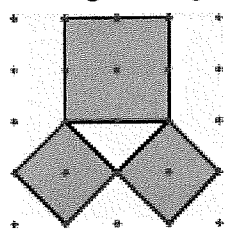


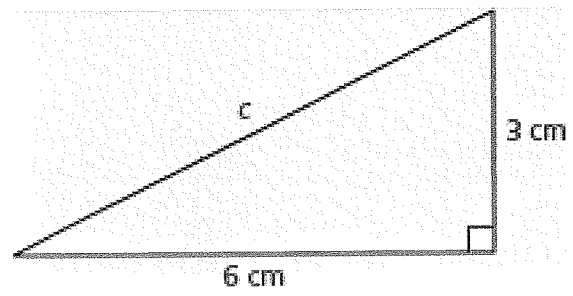
LFP - Homework 3.1 Name: \_\_\_\_\_

1. The diagram below shows a right triangle with a square on each side.



- a. Find the areas of the three squares.
  - b. Use the areas from part (a) to show that the squares on the sides of this triangle satisfy the Pythagorean relationship,  $a^2 + b^2 = c^2$ .
3. A right triangle has legs of length 5 inches and 12 inches.
- a. Find the area of a square drawn on the hypotenuse of the triangle.
  - b. Find the length of the hypotenuse.

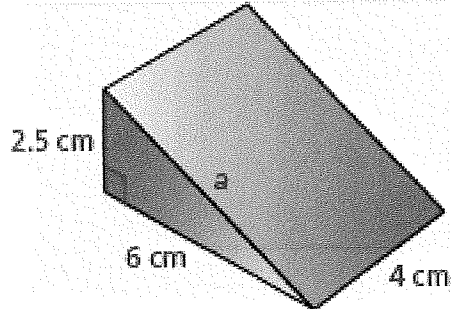
4. Use the Pythagorean Theorem to find the length of the hypotenuse of this triangle.



# Connections

---

17. The prism below has a base that is a right triangle.



- What is the value of  $a$ ? (Hint: make sure you use  $a^2 + b^2 = c^2$ )
- What is the surface area? (Hint: Find the area of each side and add them together)
- What is the volume? (Hint:  $V = Bh$ )
- Sketch a net for the prism

# Extensions

---

27. Find the missing lengths.

