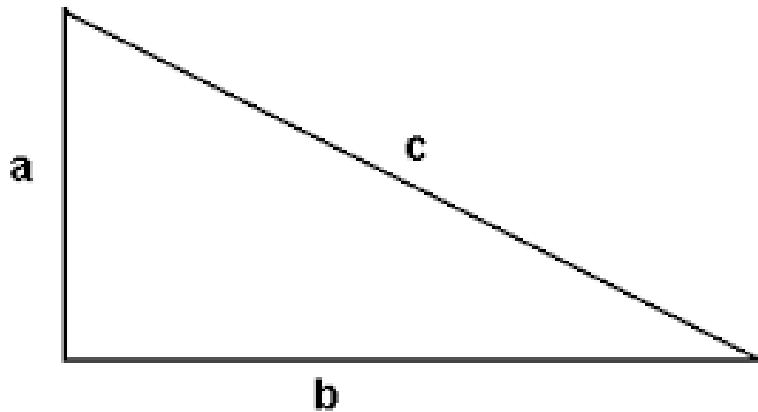# Chapter 7

>> RIGHT TRIANGLES AND TRIGONOMETRY
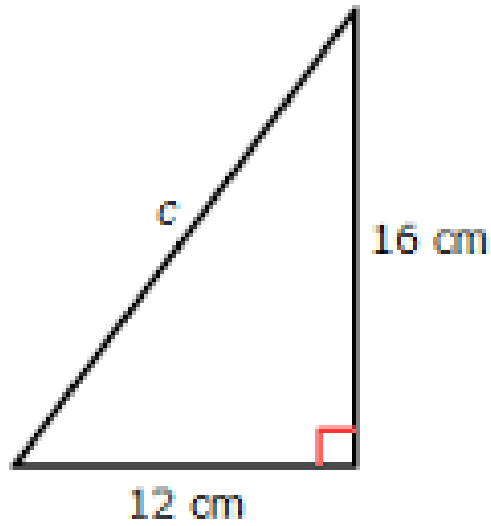
7.1

>> PYTHAGOREAN THEOREM

Pythagorean Theorem

- In a _____, the Pythagorean Theorem says _____, where _____ is the _____ and _____ are the _____.
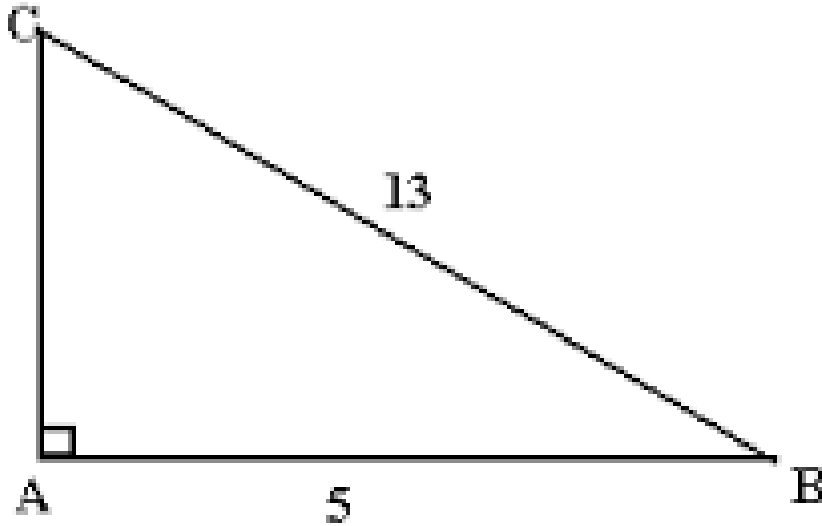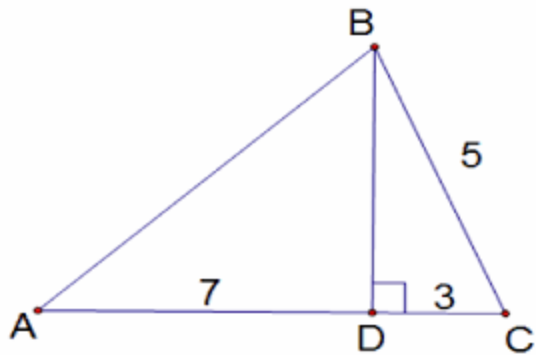
EX:

What is the length of the hypotenuse?
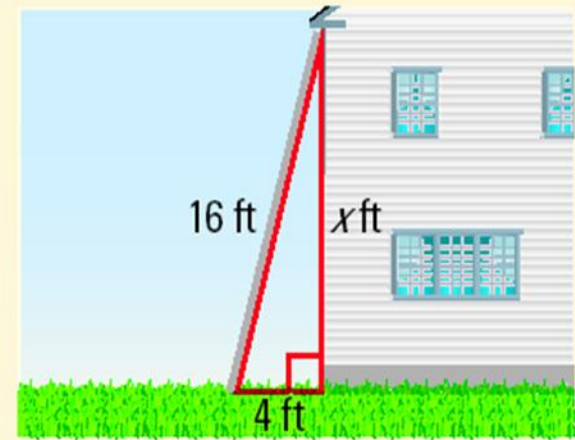
EX: Find the unknown side.

EX: Find AB.

EX: Standardized Test Practice

A 16 foot ladder rests against the side of the house, and the base of the ladder is 4 feet away. Approximately how high above the ground is the top of the ladder?

A 240 feet

B 20 feet

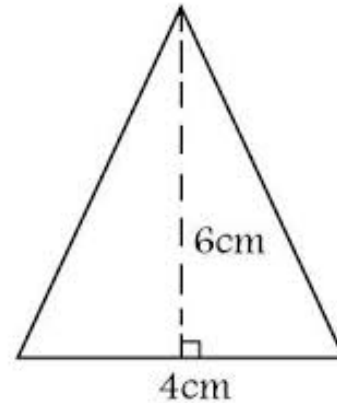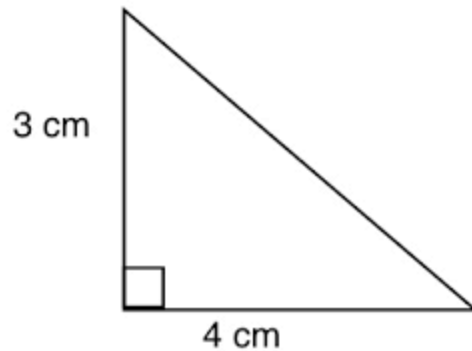**C** 16.5 feet

D 15.5 feet

16 ft | x ft

4 ft

EX:

- The top of a ladder rests against a wall, 23 feet above the ground. The base of the ladder is 6 feet away from the wall. What is the length of the ladder?
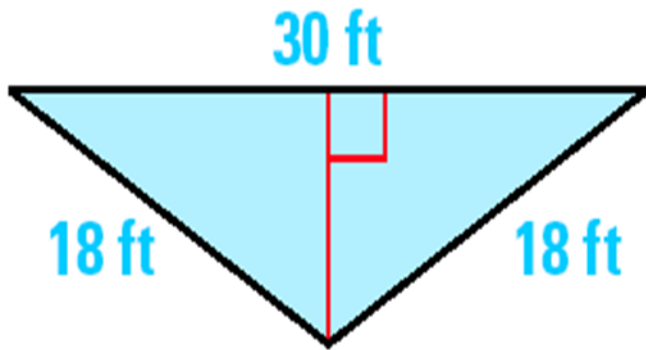
Area of a Triangle

- Area = _____
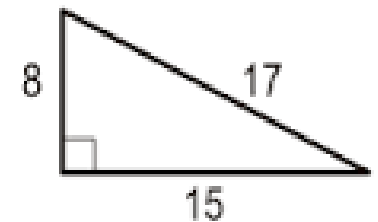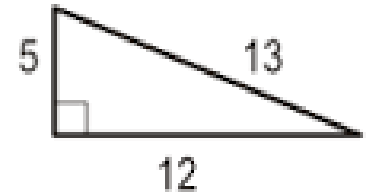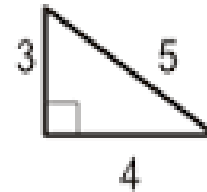- b = _____
- h = _____

EX:

Find the area of the triangle.

30 ft

18 ft   18 ft

Pythagorean Triples

▸ A set of _____ that makes _____ true.

Pythagorean Triples			
(3, 4, 5)	(5, 12, 13)	(7, 24, 25)	(8, 15, 17)
(9, 40, 41)	(11, 60, 61)	(12, 35, 37)	(13, 84, 85)
(16, 63, 65)	(20, 21, 29)	(28, 45, 53)	(33, 56, 65)
(36, 77, 85)	(39, 80, 89)	(48, 55, 73)	(65, 72, 97)

EX: Use Pythagorean Triples to find the missing side.