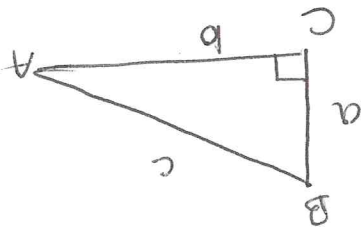
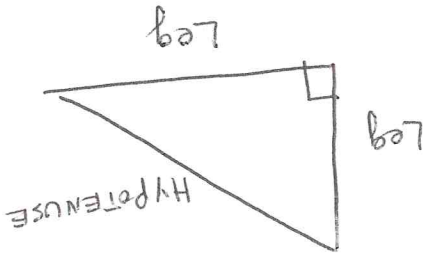


Chapter 7 Right Triangles and Trigonometry

Date	Section Topic	Page and #	Worksheet/ Quiz
_____	7.1 Pythagorean Theorem	P436 #4,5,9,11,15,18,21 (Bonus P438 #30)	
_____	7.2 Converse of Pythagorean T	P444 #15-27(o) P447 #1-9(o) $\sqrt{3}, 2x$	Practice 7.1-7.2 Quiz 1
_____	7.3 ~Similar Right Triangles	P453 #8,9,10,14,15,22	
_____	7.4 Special Right Triangles	P461 #3-5,8-10,16,17,23,27	
_____	4.5,45,90 = x, x, x $\sqrt{2}$	P464 #1-5	Practice 7.3-7.4 Quiz 2
_____	30,60,90 = x, x $\sqrt{3}, 2x$		
_____	7.5 Applying Tangent	P469 #3-8,18-21,24,27	
_____	7.6 Applying Sine and Cosine	P477 #3,7,10-15,20,21,25,36	Practice 7.5-7.6
_____	7.7 Solving Right Triangles	P485 #3-5,10-12,21-27(o) P489 #1-6	Practice 7.7 Quiz 3
_____	Review	P494 #5-31(o) P498 #1-17(o)	
_____	Test		Ch 7 TEST-B



THE HYPOTENUSE IS EQUAL TO THE SUM OF THE SQUARES OF THE LENGTHS OF THE LEGS.

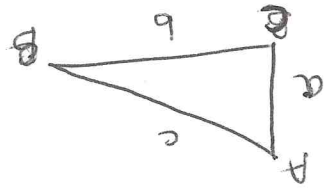
**THE PYTHAGOREAN THEOREM:-** IN A RIGHT TRIANGLE, THE SQUARE OF THE HYPOTENUSE IS EQUAL TO THE SUM OF THE SQUARES OF THE

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

TRIPLES:-

- 2) COMMON PYTHAGOREAN TRIPLES:-
- 3, 4, 5
  - 6, 8, 10
  - 9, 12, 15
  - 30, 40, 50
  - 3x, 4x, 5x
- 5, 12, 13
- 10, 24, 26
- 15, 36, 39
- 50, 120, 130
- 5x, 12x, 13x
- 8, 15, 17
- 16, 30, 34
- 24, 45, 51
- 80, 150, 170
- 8x, 15x, 17x
- 7, 24, 25
- 14, 48, 50
- 21, 72, 75
- 70, 240, 250
- 7x, 24x, 25x

**7.2. CONVERSE OF PYTHAGOREAN THEOREM:**



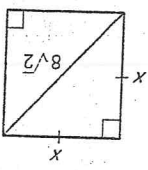
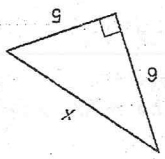
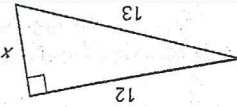
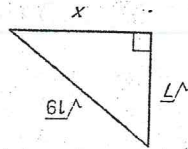
- 1) IF  $c^2 = a^2 + b^2$ , THEN  $\Delta ABC$  IS A RIGHT ANGLE.
- 2) IF  $c^2 < a^2 + b^2$ , THEN  $\Delta ABC$  IS ACUTE.
- 3) IF  $c^2 > a^2 + b^2$ , THEN  $\Delta ABC$  IS OBTUSE.
- (ACUTE)
- 
- (OBTUSE)
-

Name \_\_\_\_\_

Date \_\_\_\_\_

Find the unknown side length. Simplify answers that are radicals.

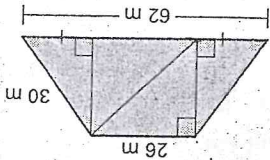
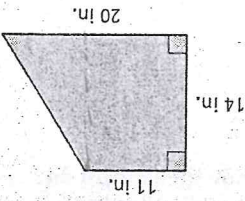
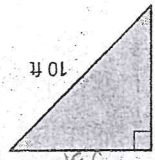
Tell whether the side lengths form a Pythagorean triple.



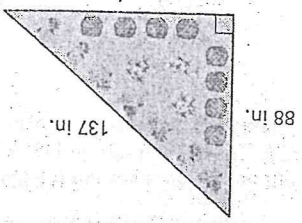
The given lengths are two sides of a right triangle. All three side lengths of the triangle are integers and together form a Pythagorean triple. Find the length of the third side and tell whether it is a leg or the hypotenuse.

- 13. 40 and 41
- 14. 12 and 35
- 15. 63 and 65

Find the area of the figure. Round decimal answers to the nearest tenth.



36. Garden You have a garden that is in the shape of a right triangle with the dimensions shown. Find the perimeter of the garden.



37. You are going to plant a post every 15 inches around the garden's perimeter. How many posts do you need?