

Find the area of the isosceles

Find the area of the right triangle. Write your answer in simplest radical form.

27.  $8^2 + 12^2 = x^2$   
 $64 + 144 = x^2$   
 $208 = x^2$   
 $x = \sqrt{208} = \sqrt{16 \cdot 13} = 4\sqrt{13}$

28.  $5^2 + 10^2 = x^2$   
 $25 + 100 = x^2$   
 $125 = x^2$   
 $x = \sqrt{125} = 5\sqrt{5}$

29.  $x^2 + 16^2 = 20^2$   
 $x^2 + 256 = 400$   
 $x^2 = 144$   
 $x = 12$

$A = \frac{1}{2}bh$   
 $\frac{1}{2}(16)(6) = 48 \text{ in}^2$

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3,4,5	5,12,13	8,15,17	7,24,25
6,8,10	15,36,39		
9,12,15	50,120,130		
30,40,50			

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.

14. 30 and 40      15. 15 and 36      16. 70 and 250  
 17. 45 and 51      18. 15 and 20      19. 96 and 100

14 3,4,5 (hypot)      18 3,4,5 (hypot)  
 15 5,12,13 (hypot)      19 7,24,25  
 16 7, 24, 25  
     Leg  
 17. 8, 15, 17  
     Leg

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LESSON 7.2 Practice A  
 For use with the lesson "Use the Converse of the Pythagorean Theorem"

Tell whether the triangle is a right triangle.

1.  $15^2 + 20^2 = 25^2$  (Right)

2.  $8^2 + 15^2 \neq 17^2$

3.  $21^2 + 16^2 = 24^2$

Decide whether the numbers can represent the side lengths of a triangle. If they can, classify the triangle as acute, right, or obtuse.

4. 6, 8, 10      RT  
 $6^2 + 8^2 = 10^2$   
 Right

5. 5, 7, 9  
 $5^2 + 7^2 < 9^2$   
 $25 + 49 < 81$   
 $74 < 81$   
 OBTUSE

6. 8, 9, 10      acute  
 $8^2 + 9^2 > 10^2$   
 $64 + 81 > 100$   
 $148 > 100$

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$a^2 + b^2 = c^2$  Rt  
 $a^2 + b^2 < c^2$  obtuse  
 $a^2 + b^2 > c^2$  acute

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