NAME Key DATE _____ SCORE _____

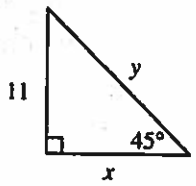
Converse of Pythagorean Theorem; Special Right Triangles

For use after Section 8–4

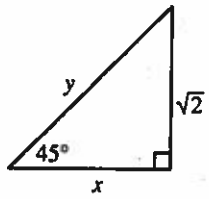
Tell whether a triangle with sides of the given lengths is acute, right, or obtuse. If a triangle can't be formed, write *not possible*.

1. 5, 6, 7 acute
2. 3, 5, 7 obtuse
3. 2.0, 2.1, 2.7 acute
4. 8, 15, 17 right
5. 2, $\sqrt{3}$, 5 not poss.
6. 9, 12, 15 right
7. 6, 8, 10 right
8. 5, 5, 9 obtuse
9. 9, 40, 41 right

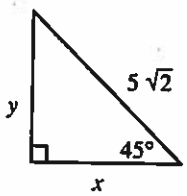
Find the missing lengths.

10. 

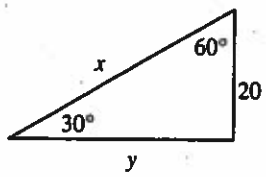
$x =$ 11
$y =$ $11\sqrt{2}$

11. 

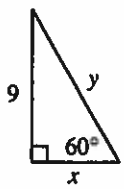
$x =$ $\sqrt{2}$
$y =$ 2

12. 

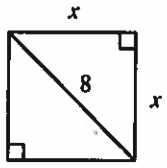
$x =$ 5
$y =$ 5

13. 

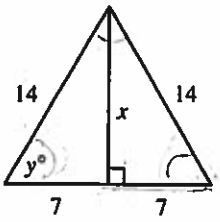
$x =$ 40
$y =$ $20\sqrt{3}$

14. 

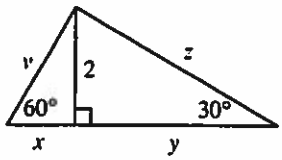
$x =$ $3\sqrt{3}$
$y =$ $6\sqrt{3}$

15. 

$x =$ $4\sqrt{2}$

16. 

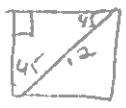
$x =$ $7\sqrt{3}$
$y =$ 60

17. 

$x =$ $\frac{2\sqrt{3}}{3}$
$y =$ $2\sqrt{3}$
$z =$ 4
$v =$ $\frac{4\sqrt{3}}{3}$

18. An equilateral triangle has sides of length 16. Find the length of an altitude. $8\sqrt{3}$

19. Find the perimeter of a square with diagonal of length 12. $24\sqrt{2}$



20. An equilateral triangle has an altitude of length $5\sqrt{3}$. Find the perimeter. 30