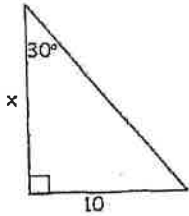


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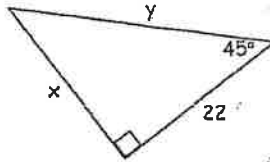
Date:

Practice Sheet:  $30^\circ$ - $60^\circ$ - $90^\circ$  and  $45^\circ$ - $45^\circ$ - $90^\circ$  Triangles

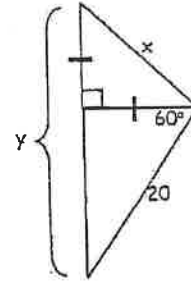
1. Find  $x$ .



2. Find  $x$  and  $y$ .



3. Find  $x$  and  $y$ .



4. Find the altitude of an equilateral triangle with perimeter 18.

5. Find the diagonal of a square with side length 2.

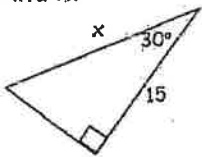
6. Find the legs of an isosceles right triangle with hypotenuse 18.

7. Find the perimeter of a square with a diagonal of 14.

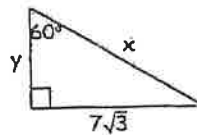
8. One angle of a rhombus is  $60^\circ$ . If the perimeter is 48, find each diagonal.

9. Find the perimeter of an equilateral triangle with an altitude of  $40\sqrt{3}$ .

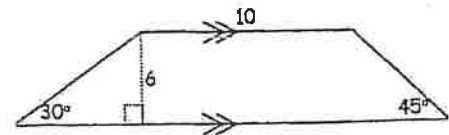
10. Find  $x$ .



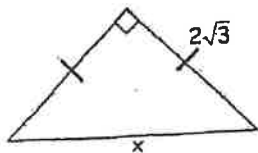
11. Find  $x$  and  $y$ .



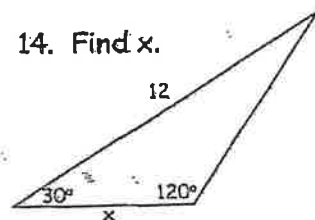
12. Find the perimeter of the trapezoid.



13. Find  $x$ .

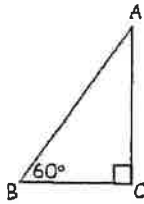


14. Find  $x$ .

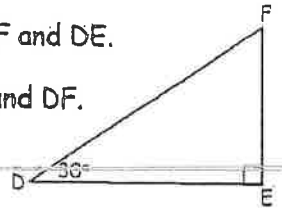


15. Find the area of an equilateral triangle with altitude  $4\sqrt{3}$ .

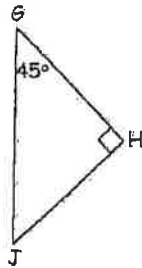
16. a. If  $AB = 15$ , find  $BC$  and  $AC$ .  
 b. If  $AC = 2\sqrt{3}$ , find  $BC$  and  $AB$ .  
 c. If  $AC = \frac{17\sqrt{3}}{2}$ , find  $BC$  and  $AB$ .



17. a. If  $EF = \sqrt{5}$ , find  $DE$  and  $DF$ .  
 b. If  $DF = \sqrt{17}$ , find  $EF$  and  $DE$ .  
 c. If  $DE = 12$ , find  $EF$  and  $DF$ .

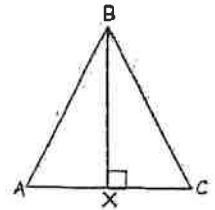


18. a. If  $GH = 1$ , find  $HJ$  and  $GJ$ .  
 b. If  $HJ = \frac{9}{2}$ , find  $GH$  and  $GJ$ .  
 c. If  $HJ = \sqrt{5}$ , find  $GH$  and  $GJ$ .

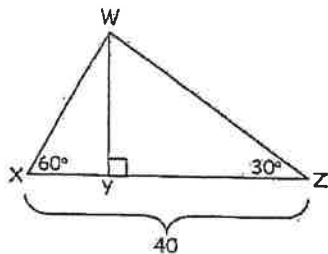


19. Given:  $\triangle ABC$  is equilateral.

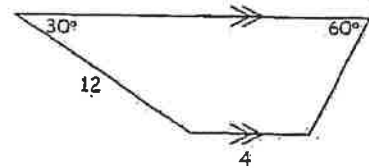
- a. If  $AX = 3$ , find  $AB$ .  
 b. If  $AB = 8$ , find  $BX$ .  
 c. If  $AX = 2\sqrt{3}$ , find  $BX$ .  
 d. If  $BX = 9$ , find  $AX$ .



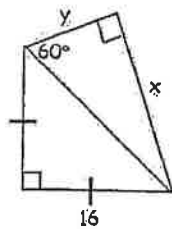
20. Find  $YZ$ ,  $XY$ , and  $WY$ .



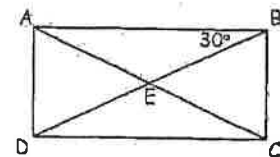
21. Find the perimeter.



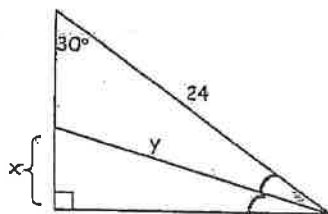
22. Find  $x$  and  $y$ .



23.  $ABCD$  is a rectangle  $AE = 26$ .  
 Find the perimeter



24. Find  $x$  and  $y$ .



25. Find  $a$ ,  $b$ ,  $c$ , and  $d$ .

