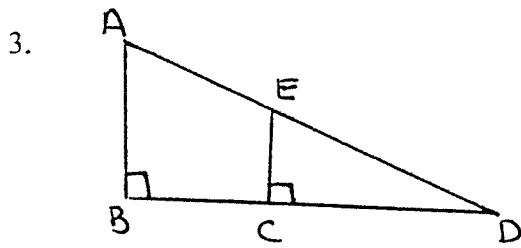
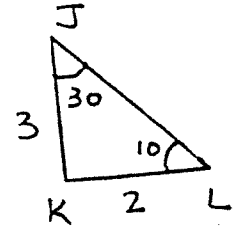
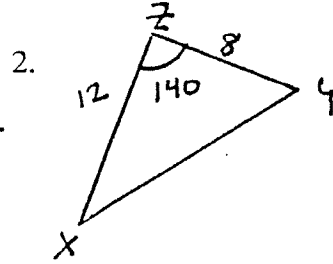
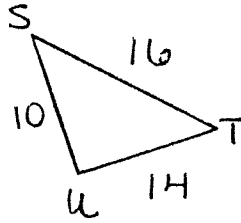
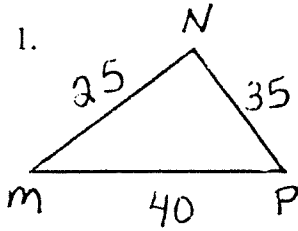


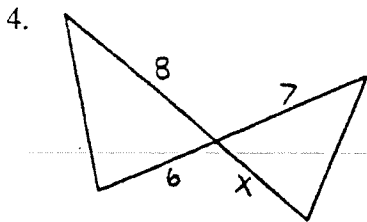
Name \_\_\_\_\_

### Geometry (H) - Chapter 7 - Review

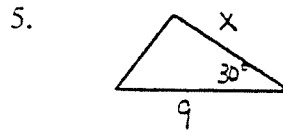
Determine whether the two triangles shown are similar. If so, state the postulate or theorem that justifies your answer. Write a similarity statement.



Find the values of  $x$  that make the triangles similar by the SAS similarity theorem.



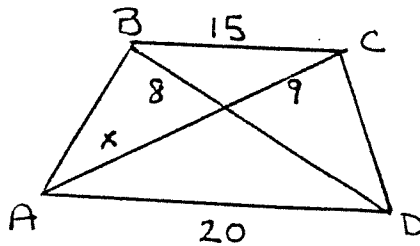
$x =$  \_\_\_\_\_



$x =$  \_\_\_\_\_

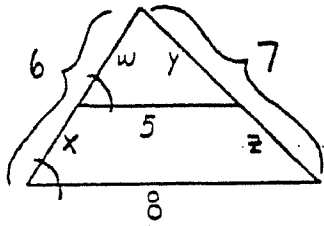
6.  $\overline{BC} \parallel \overline{AD}$ . Find  $x$

$x =$  \_\_\_\_\_



Find the length of each segment.

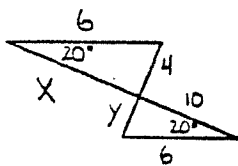
7.



$w = \underline{\hspace{2cm}}$   $x = \underline{\hspace{2cm}}$

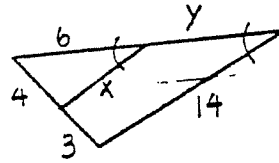
$y = \underline{\hspace{2cm}}$   $z = \underline{\hspace{2cm}}$

9.



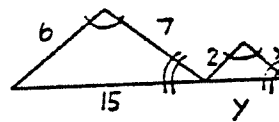
$x = \underline{\hspace{2cm}}$   $y = \underline{\hspace{2cm}}$

8.



$x = \underline{\hspace{2cm}}$   $y = \underline{\hspace{2cm}}$

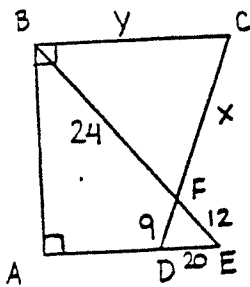
10.



$x = \underline{\hspace{2cm}}$   $y = \underline{\hspace{2cm}}$

ABCD is a trapezoid with bases  $\overline{AD}$  and  $\overline{BC}$ . Identify a pair of similar triangles and find x and y.

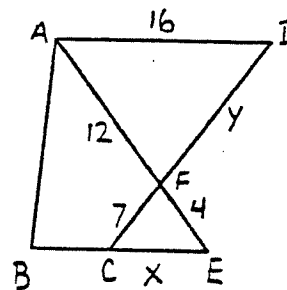
11.



Similar triangles:  $\underline{\hspace{2cm}}$

$x = \underline{\hspace{2cm}}$   $y = \underline{\hspace{2cm}}$

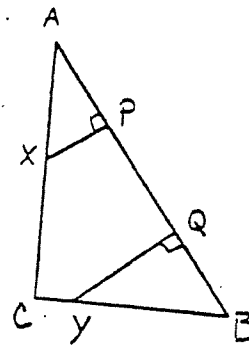
12.



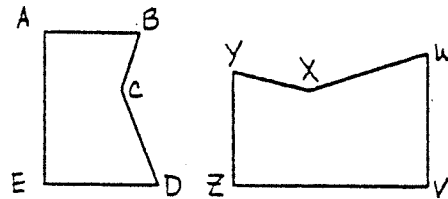
Similar triangles:  $\underline{\hspace{2cm}}$

$x = \underline{\hspace{2cm}}$   $y = \underline{\hspace{2cm}}$

13. Given:  $\overline{AC} \cong \overline{BC}$   
 $\overline{XP} \perp \overline{AB}$  at P  
 $\overline{YQ} \perp \overline{AB}$  at Q  
 Prove:  $\triangle XPA \sim \triangle YQB$

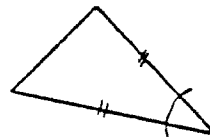


14.  $WX = 20$   $AB = 15$   
 $VZ = 16$   $BC = 25$   
 $VWXYZ \sim ABCDE$

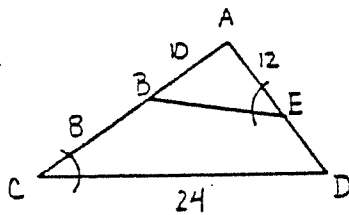


- a. The scale factor of VWXYZ to ABCDE is \_\_\_\_\_.  
 b.  $AE =$  \_\_\_\_\_  
 c.  $WV =$  \_\_\_\_\_

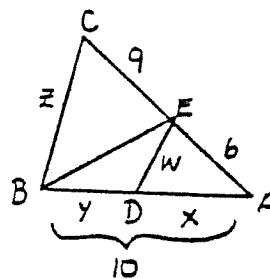
15. Decide whether these polygons are similar. Provide a brief explanation.



16.  $AD =$  \_\_\_\_\_  
 $BE =$  \_\_\_\_\_



17.  $\overline{DE} \parallel \overline{BC}$ .  $\overline{BE}$  bisects  $\angle ABC$ .  $AB = 10$ .



Find:

$w =$  \_\_\_\_\_  $x =$  \_\_\_\_\_  $y =$  \_\_\_\_\_  $z =$  \_\_\_\_\_

18. Use the proportion  $\frac{r-t}{t} = \frac{s-u}{u}$  to complete the proportion

$$\frac{r-2t}{t} = \underline{\hspace{2cm}}$$

19. A blueprint is drawn to the scale of  $\frac{1}{4}$  in. to 8 feet. A wall is represented on the blueprint by a length of 3.5 in. If it costs \$36 per foot to build a wall, find the total cost to build the wall.

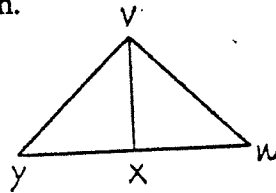
20. In  $\triangle VYW$ ,  $\overline{VX}$  bisects  $\angle YVW$ . Find the indicated length.

a. If  $VY = 15$ ,  $VW = 12$  and  $YX = 8$ , find  $XW$ .

$$XW = \underline{\hspace{2cm}}$$

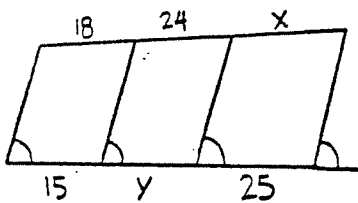
b. If  $YX = 3$ ,  $XW = 5$ , and  $VW = 6$ , find  $VY$ .

$$VY = \underline{\hspace{2cm}}$$



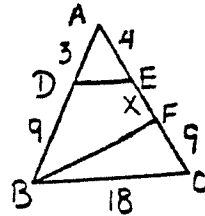
21. Use the picture below.

$$x = \underline{\hspace{2cm}} \quad y = \underline{\hspace{2cm}}$$



22.  $\overline{DE} \parallel \overline{BC}$

$$x = \underline{\hspace{2cm}}$$

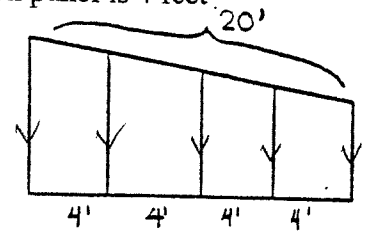


Show  $\overline{BF}$  is not the  $\angle$  bisector.  
(HINT: Assume it is and find x!)

23. A 6 foot tall man is standing 4 feet away from a 10 foot tall tree. The sun is shining so that the end of the man's shadow and the end of the tree's shadow are at exactly the same spot. How long is the man's shadow? Please include a diagram to show your work.

24. Paneling is put up as shown in a room with a slanted ceiling. Each panel is 4 feet wide.

a. Find the length along the top of each panel.



b. If the panels were of differing widths, 4 ft, 3 ft, 4 ft, and 5 ft, what would the length of the top of each be?

25. To find the distance  $x$  between points A and B, a surveyor located points C, D and E through direct measurement. Find the distance  $x$ .

