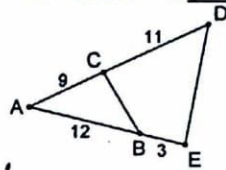
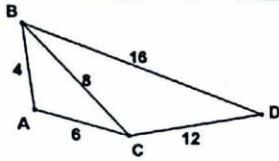


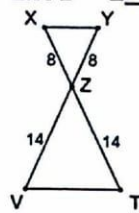
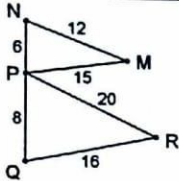
If the triangles in 1 – 3 can be proved similar, (1) Complete the similarity statement and (2) Tell which theorem or postulate you would use. If they cannot be proved similar then write "None."

1.  $\triangle ABC \sim \triangle CBD$  by SSS postulate      2.  $\triangle ABC \sim \triangle$  \_\_\_\_\_ by NONE

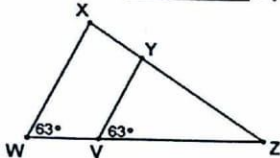


$$\frac{20}{9} \neq \frac{15}{12}$$

3.  $\triangle NMP \sim \triangle QRP$  by SSS post.      4.  $\triangle XYZ \sim \triangle TVZ$  by SAS post.



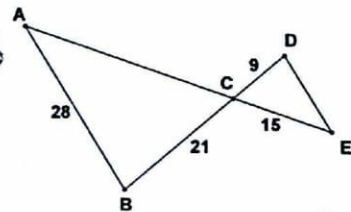
5.  $\triangle YVZ \sim \triangle XWZ$  by AA post.



6.  $\triangle BAC \sim \triangle DEC$

a. What is the scale factor of  $\triangle BAC$  to  $\triangle DEC$ ?  $\frac{3}{7} \approx .4286$

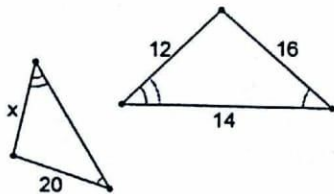
b. Find AC. 35  
 $15(\frac{7}{3}) = 35$



c. Find DE. 12  
 $28(\frac{3}{7})$

Find the value of x.

7.  $x =$  15

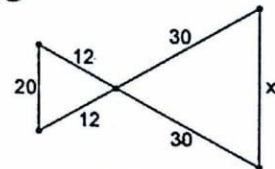


$$\frac{16}{20} = \frac{12}{x}$$

$$16x = 20(12)$$

$$x = \frac{240}{16}$$

8.  $x =$  ~~40~~ 50



$$\frac{30}{12} = \frac{x}{20}$$

$$600 = 12x$$

$$50 = x$$

9. Midsegment of a Triangle:

a. The midsegment of a triangle joins the midpoints of two sides of a triangle.

b. The midsegment is parallel to the third side and is half the length of the third side.

10. The sum of the measures of the angles of a triangle is  $180^\circ$  by the triangle sum theorem.

11. The exterior angle of a triangle is equal to sum of the remote interior angles of the triangle.

12. Triangle Proportionality Theorem and its converse:

a. A line that is parallel to one side of a triangle divides the other two sides proportionally.

b. If a line intersects 2 sides of a triangle so that it divides those 2 sides proportionally, then it is parallel to the third side.

Use the diagram to answer 13 – 14.

13. Name the type of each given angle pair.

a.  $\angle 3$  and  $\angle 5$

alternate interior

d.  $\angle 7$  and  $\angle 2$

consecutive exterior

b.  $\angle 1$  and  $\angle 7$

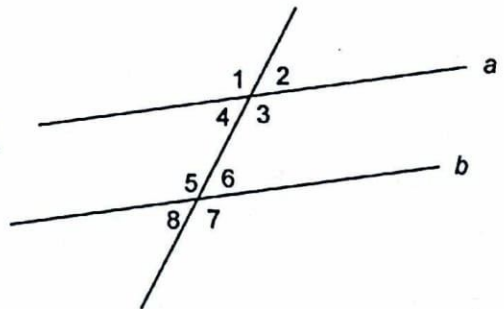
alternate exterior

e.  $\angle 6$  and  $\angle 3$

consecutive interior

c.  $\angle 4$  and  $\angle 8$

corresponding



14. Given:  $a \parallel b$  and  $m\angle 5 = 132^\circ$ . Find the measure of each of the remaining angles.

$m\angle 1 = 132^\circ$ ,  $m\angle 2 = 48^\circ$ ,  $m\angle 3 = 132^\circ$ ,  $m\angle 4 = 48^\circ$ ,  
 $m\angle 6 = 48^\circ$ ,  $m\angle 7 = 132^\circ$ ,  $m\angle 8 = 48^\circ$