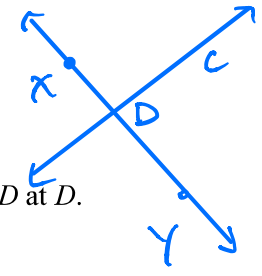


$$RS = \frac{2}{3} RT$$

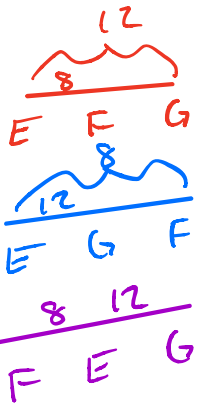
$$48 = \frac{2}{3} RT$$

$$\frac{3}{2}(48) = RT$$



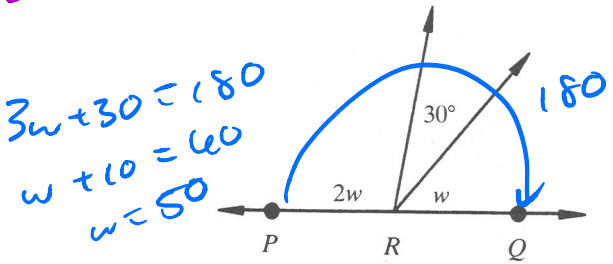
248 S T **Practice Exercise 11**

1. Three points  $R, S,$  and  $T$  are collinear. Point  $S$  lies between  $R$  and  $T$ . If  $RS = \frac{2}{3}RT$  and  $RS = 48$ , find  $\frac{1}{2}RT$ .
- A. 72      **D. 36**  
 B. 60      E. 24  
 C. 48



2. Points  $E, F,$  and  $G$  are collinear. If  $EF = 8$  and  $EG = 12$ , which point cannot lie between the other two?
- A.  $E$       D.  $F$  and  $G$   
 B.  $F$       E. Cannot be determined  
**C.  $G$**

3. If  $PRQ$  is a straight line, find the number of degrees in  $\angle w$ .



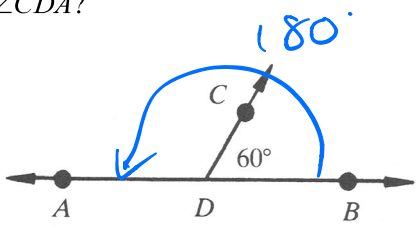
$$3w + 30 = 180$$

$$w + 10 = 60$$

$$w = 50$$

- A. 30      D. 70  
**B. 50**      E. 100  
 C. 60

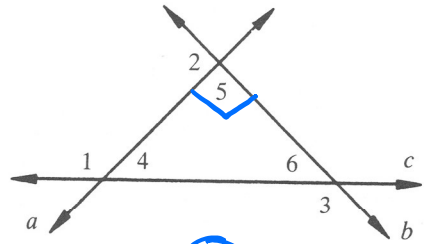
4. In the figure, if  $\overline{AB}$  is a straight line and  $m\angle CDB = 60^\circ$ , what is the measure of  $\angle CDA$ ?



- A.  $15^\circ$       D.  $90^\circ$   
 B.  $30^\circ$       **E.  $120^\circ$**   
 C.  $60^\circ$

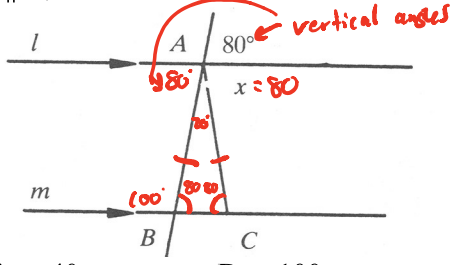
5. Line  $XY$  is perpendicular to line  $CD$  at  $D$ . Which conclusion can be drawn?
- A.  ~~$XD = DY$~~   
 B.  ~~$XY = CD$~~   
**C.  $m\angle XDC = 90^\circ$**  ✓  
 D.  ~~$m\angle XDC = 90^\circ$  and  $XD = DY$~~   
 E. All of the above

6. In the figure,  $a, b,$  and  $c$  are lines with  $a \perp b$ . Which angles are congruent?



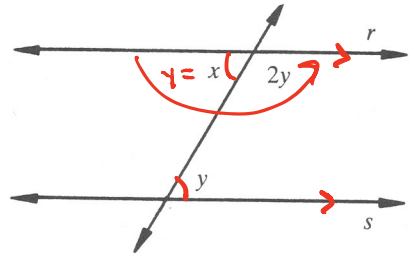
- A.  $\angle 4, \angle 5$       **D.  $\angle 2, \angle 5$**   
 B.  $\angle 4, \angle 6$       E.  $\angle 2, \angle 6$   
 C.  $\angle 4, \angle 3$

7.  $l \parallel m$ , and  $AB = AC$ . Find  $x$ .



- A. 40      D. 100  
 B. 60      E. None of the above  
**C. 80**

8. In the figure, if lines  $r$  and  $s$  are parallel, what is the value of  $x$ ?



- A. 30      D. 120  
**B. 60**      E. 150  
 C. 90

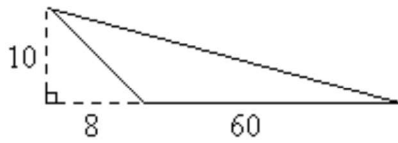
$$x = y$$

$$y + 2y = 180$$

$$3y = 180$$

$$y = 60$$

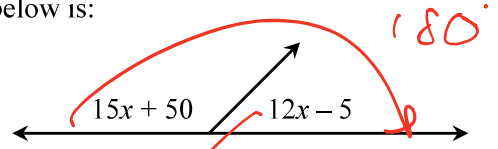
9. The height of the triangle below is 10 units. What is its area?



- A. 150  
 B. 300  
 C. 340  
 D. 600  
 E. 680

$$\begin{aligned}
 A &= \frac{1}{2}hb \\
 &= \frac{1}{2}(10)(60) \\
 &= 300
 \end{aligned}$$

10. The measure of the smaller angle in figure below is:



- A. 55°  
 B. 75°  
 C. 105°  
 D. 125°  
 E. 180°

$$27x + 45 = 180$$

$$27x = 135$$

$$x = 5$$

$$12(5) - 5 = 55$$