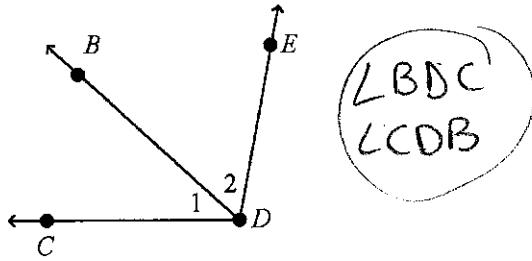
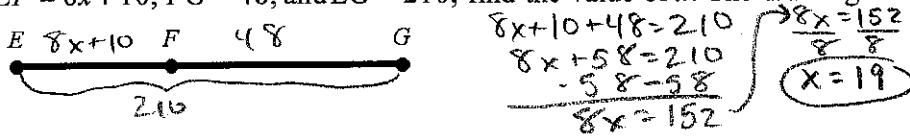


**Math 1 Ch.7 Test Review**

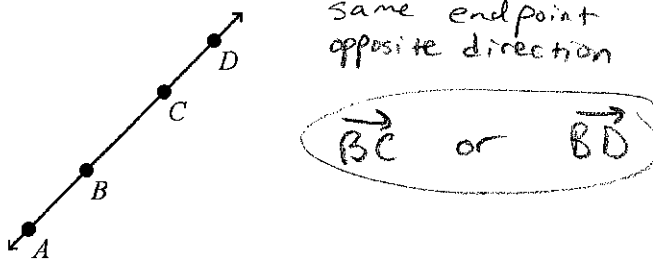
1. What are two other names for  $\angle 1$ ?



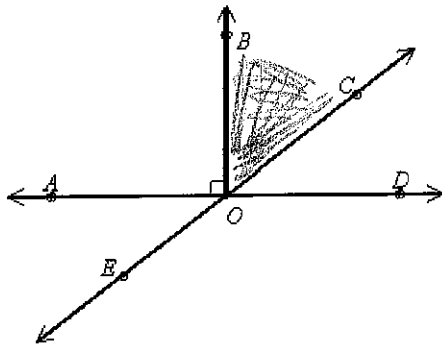
2. The complement of an angle is  $26^\circ$ . What is the measure of the angle?  $26 + x = 90$   
 $\begin{array}{r} 26 + x = 90 \\ -26 \quad -26 \\ \hline x = 64 \end{array}$
3. If  $EF = 8x + 10$ ,  $FG = 48$ , and  $EG = 210$ , find the value of  $x$ . The drawing is not to scale.



4.  $\angle DFG$  and  $\angle JKL$  are complementary angles.  $m\angle DFG = x + 3$ , and  $m\angle JKL = x - 1$ . Find the measure of each angle.  
 $x + 3 + x - 1 = 90$   
 $2x + 2 = 90$   
 $\frac{2x}{2} = \frac{88}{2}$   
 $x = 44$   
 $m\angle DFG = 44 + 3 = 47^\circ$   
 $m\angle JKL = 44 - 1 = 43^\circ$
5. What is the name of the ray that is opposite  $BA$ ?



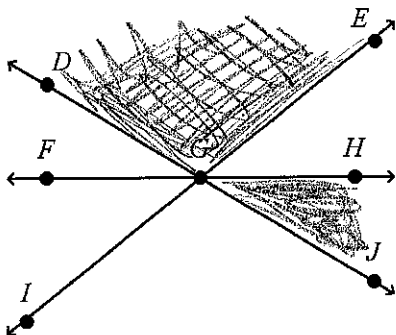
6.  $\angle 1$  and  $\angle 2$  are a linear pair.  $m\angle 1 = x - 16$ , and  $m\angle 2 = x + 98$ . Find the measure of each angle.  
 $x - 16 + x + 98 = 180$   
 $2x + 82 = 180$   
 $-82 -82$   
 $2x = 98$   
 $\frac{2x}{2} = \frac{98}{2}$   
 $x = 49$   
 $m\angle 1 = 49 - 16 = 33^\circ$   
 $m\angle 2 = 49 + 98 = 147^\circ$
7. Shade an angle complementary to  $\angle COD$ .



8. Find the distance between points  $P(7, 8)$  and  $Q(8, 2)$  to the nearest tenth.

$$\sqrt{(8-7)^2 + (2-8)^2} = \sqrt{(1)^2 + (-6)^2} = \sqrt{1+36} = \sqrt{37} = \textcircled{6.1}$$

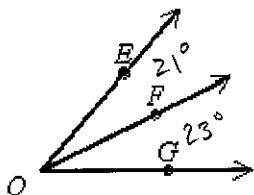
9. Shade an angle adjacent to  $\angle EGH$ .



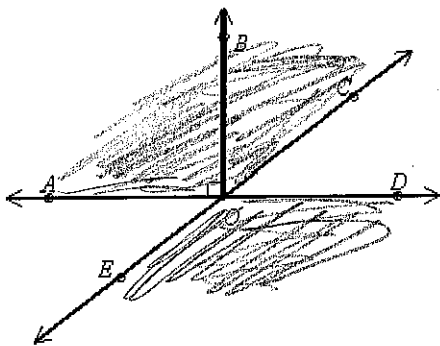
10. If  $m\angle EOF = 21$  and  $m\angle FOG = 23$ , then what is the measure of  $\angle EOG$ ? The diagram is not to scale.

$$m\angle EOG = m\angle EOF + m\angle FOG$$

$$= 21 + 23 = \textcircled{44^\circ}$$



11. Shade an angle supplementary to  $\angle EOA$ .

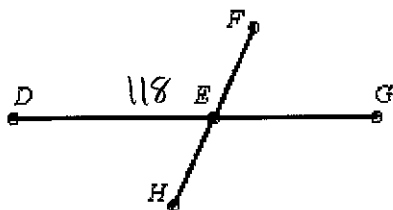


12.  $M$  is the midpoint of  $\overline{CF}$  for the points  $C(5, 5)$  and  $F(9, 9)$ . Find  $MF$ .

$$M = \left( \frac{5+9}{2}, \frac{5+9}{2} \right) = \left( \frac{14}{2}, \frac{14}{2} \right) = (7, 7)$$

$$\sqrt{(9-7)^2 + (9-7)^2} = \sqrt{(2)^2 + (2)^2} = \sqrt{4+4} = \sqrt{8} = 2.8$$

13. If  $m\angle DEF = 118$ , then what are  $m\angle FEG$  and  $m\angle HEG$ ? The diagram is not to scale.



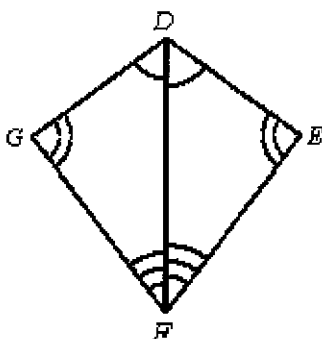
$$\begin{array}{r} m\angle FEG + 118 = 180 \\ -118 \quad -118 \\ \hline m\angle FEG = 62^\circ \end{array}$$

$$\begin{array}{r} m\angle HEG + 62 = 180 \\ -62 \quad -62 \\ \hline m\angle HEG = 118^\circ \end{array}$$

14. Find the coordinates of the midpoint of the segment whose endpoints are  $H(3, 14)$  and  $K(7, 10)$ .

$$\left(\frac{3+7}{2}, \frac{14+10}{2}\right) = \left(\frac{10}{2}, \frac{24}{2}\right) = (5, 12)$$

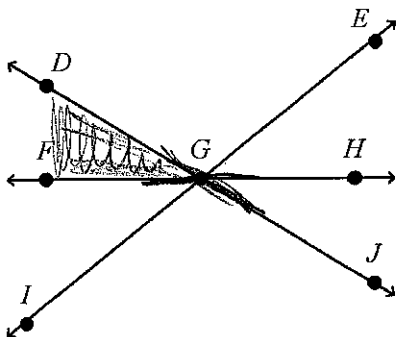
15. Complete the statement.  
The drawing is not to scale.



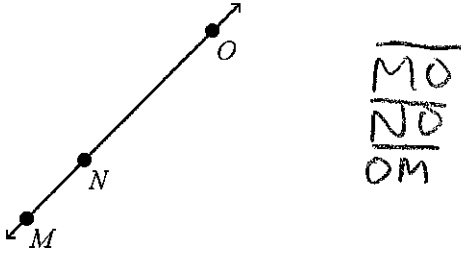
If  $m\angle DGF = 32^\circ$ , then  $m\angle DEF = ?$ .  $(32^\circ)$   
Congruent

16. Supplementary angles are two angles whose measures have a sum of  $180^\circ$ .  
Complementary angles are two angles whose measures have a sum of  $90^\circ$ .

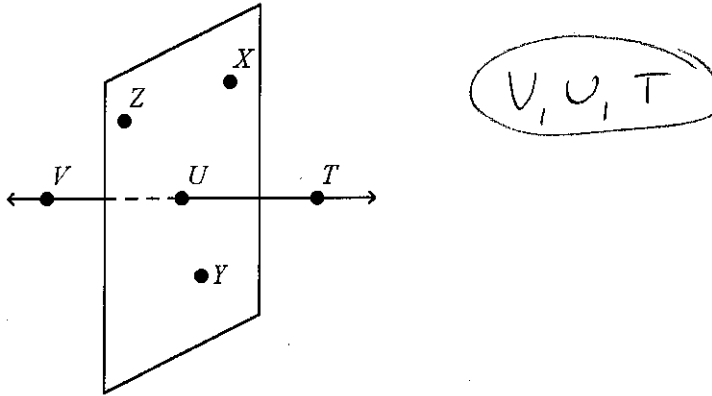
17. Shade an angle vertical to  $\angle HGJ$ .



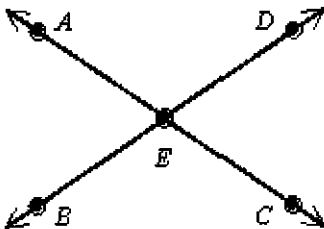
18. What are the names of the 3 different segments in the figure?



19. What are the names of three collinear points?  
on same line

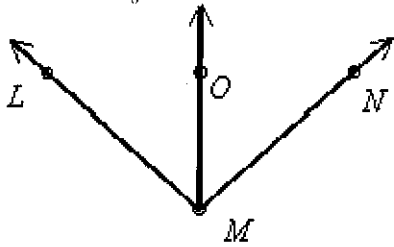


20. In the figure shown,  $m\angle AED = 135$ . Which of the following statements is false?



- Not drawn to scale
- A.  $\angle DEC$  and  $\angle DEA$  are vertical angles. *not across*
  - B.  $m\angle BEC = 135$
  - C.  $\angle DEA$  and  $\angle AEB$  are adjacent angles.
  - D.  $m\angle AEB = 45$

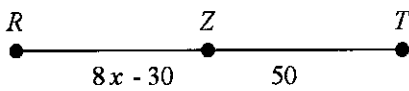
21.  $\overline{MO}$  bisects  $\angle LMN$ ,  $m\angle LMO = 7x - 29$ , and  $m\angle NMO = 2x + 31$ . Solve for  $x$  and find  $m\angle LMN$ . The diagram is not to scale.



$$\begin{array}{r} 7x - 29 = 2x + 31 \\ -2x \quad -2x \\ \hline 5x - 29 = 31 \\ +29 \quad +29 \\ \hline 5x = 60 \\ \frac{5x}{5} = \frac{60}{5} \\ x = 12 \end{array}$$

$$\begin{aligned} m\angle LMO &= 7(12) - 29 = 55 \\ m\angle NMO &= 2(12) + 31 = 55 \\ m\angle LMN &= 55 + 55 = 110^\circ \end{aligned}$$

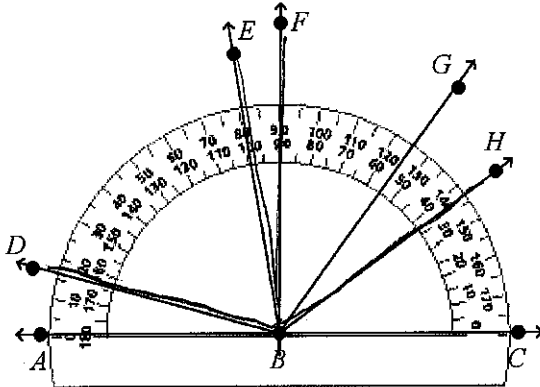
22. If  $Z$  is the midpoint of  $\overline{RT}$ , what are  $x$ ,  $RZ$ , and  $RT$ ?



$$\begin{array}{r} 8x - 30 = 50 \\ +30 \quad +30 \\ \hline 8x = 80 \\ \frac{8x}{8} = \frac{80}{8} \\ x = 10 \end{array}$$

$$\begin{aligned} RZ &= 8(10) - 30 = 50 \\ RT &= 50 + 50 = 100 \end{aligned}$$

23. What are the measures of  $\angle EBF$  and  $\angle DBH$ ? Classify each angle as *acute*, *right*, *obtuse*, or *straight*.



$$\begin{aligned} m\angle EBF &= 100 - 90 = 10^\circ \\ &\text{or} \\ m\angle EBF &= 90 - 80 = 10^\circ \end{aligned}$$

acute

$$\begin{aligned} m\angle DBH &= 144 - 16 = 128^\circ \\ &\text{or} \\ m\angle DBH &= 164 - 36 = 128^\circ \end{aligned}$$

obtuse