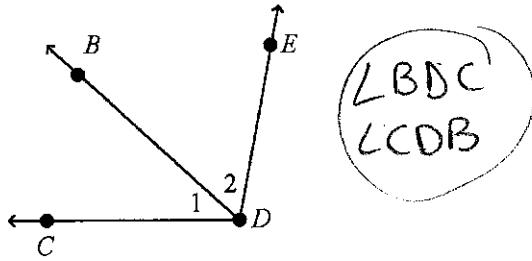
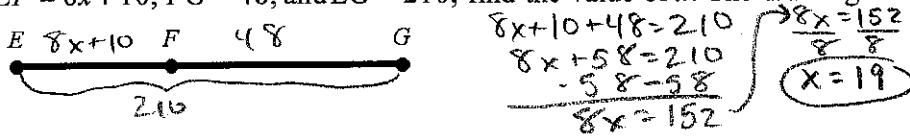


Math 1 Ch.7 Test Review

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



2. The complement of an angle is 26° . What is the measure of the angle? $26 + x = 90$
 $\quad\quad\quad -26 \quad -26$
 $\quad\quad\quad \underline{\quad\quad}$
 $x = 64^\circ$
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.

$$x + 3 + x - 1 = 90$$

$$\underline{\quad\quad} \quad \underline{\quad\quad}$$

$$2x + 2 = 90$$

$$\underline{\quad\quad} \quad \underline{\quad\quad}$$

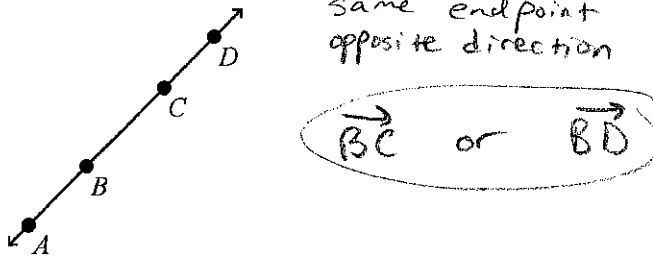
$$2x = 88$$

$$\underline{\quad\quad} \quad \underline{\quad\quad}$$

$$x = 44$$

$m\angle DFG = 44 + 3 = 47^\circ$
 $m\angle JKL = 44 - 1 = 43^\circ$

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.

$$x - 16 + x + 98 = 180$$

$$\underline{\quad\quad} \quad \underline{\quad\quad}$$

$$2x + 82 = 180$$

$$\underline{\quad\quad} \quad \underline{\quad\quad}$$

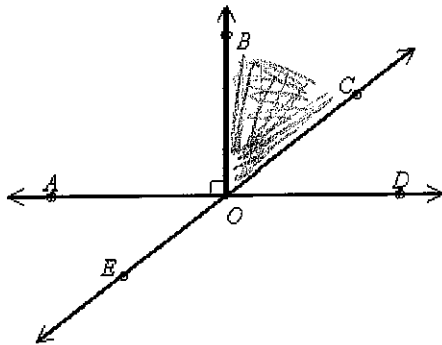
$$2x = 98$$

$$\underline{\quad\quad} \quad \underline{\quad\quad}$$

$$x = 49$$

$m\angle 1 = 49 - 16 = 33^\circ$
 $m\angle 2 = 49 + 98 = 147^\circ$

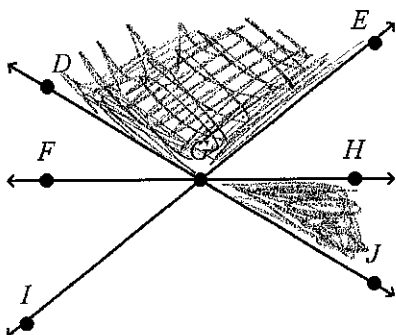
7. Shade an angle complementary to $\angle COD$.



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

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

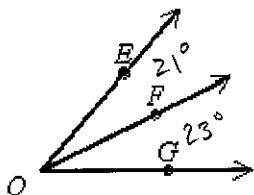
9. Shade an angle adjacent to $\angle EGH$.



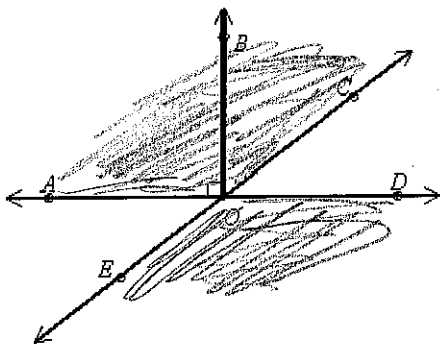
10. If $m\angle EOF = 21$ and $m\angle FOG = 23$, then what is the measure of $\angle EOG$? The diagram is not to scale.

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

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



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

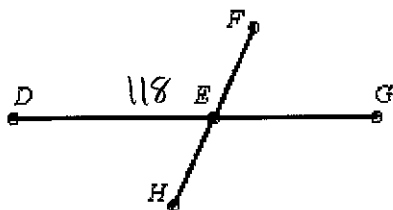


12. M is the midpoint of \overline{CF} for the points $C(5, 5)$ and $F(9, 9)$. Find MF .

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

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

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



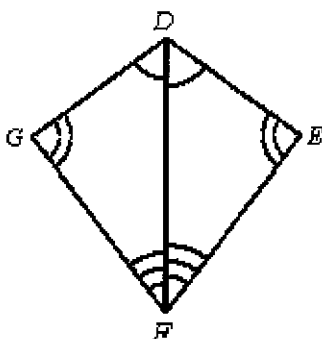
$$\begin{array}{r} m\angle FEG + 118 = 180 \\ -118 \quad -118 \\ \hline m\angle FEG = 62^\circ \end{array}$$

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

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

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

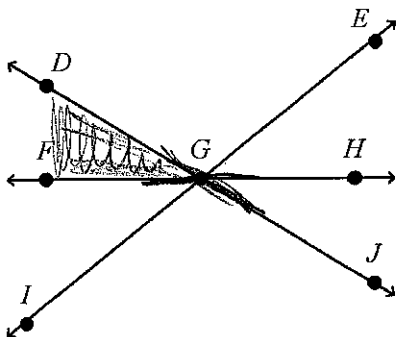
15. Complete the statement.
The drawing is not to scale.



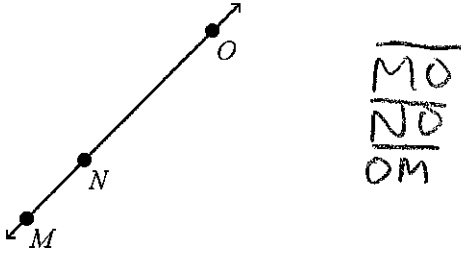
If $m\angle DGF = 32^\circ$, then $m\angle DEF = ?$. (32°)
Congruent

16. Supplementary angles are two angles whose measures have a sum of (180°) .
Complementary angles are two angles whose measures have a sum of (90°) .

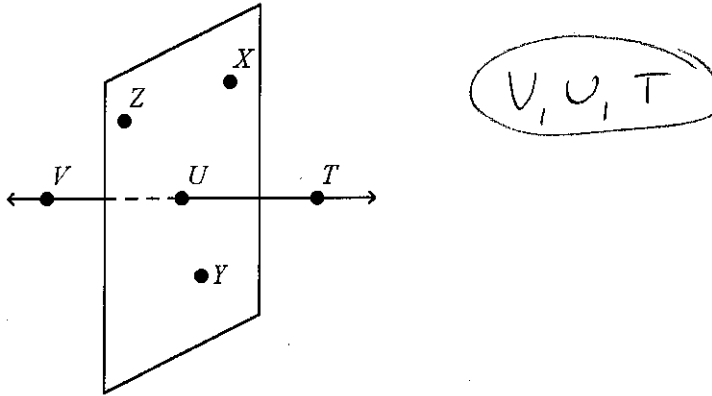
17. Shade an angle vertical to $\angle HGJ$.



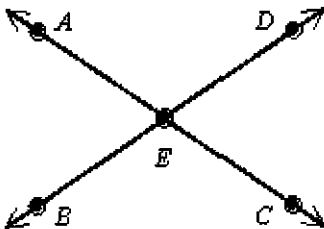
18. What are the names of the 3 different segments in the figure?



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

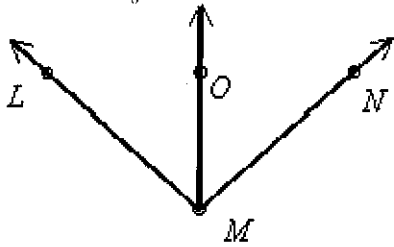


20. In the figure shown, $m\angle AED = 135$. Which of the following statements is false?



- 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. $m\angle AEB = 45$

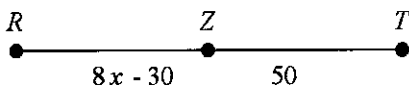
21. \overrightarrow{MO} bisects $\angle LMN$, $m\angle LMO = 7x - 29$, and $m\angle NMO = 2x + 31$. Solve for x and find $m\angle LMN$. The diagram is not to scale.



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

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

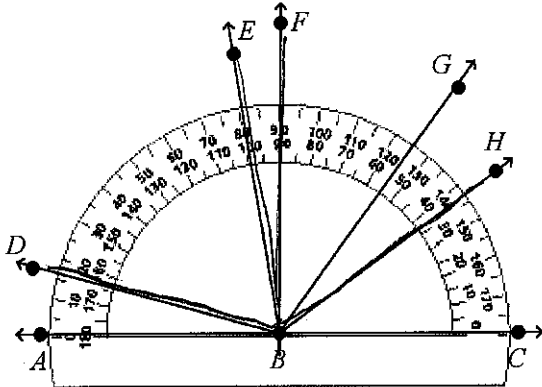
22. If Z is the midpoint of \overline{RT} , what are x , RZ , and RT ?



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

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

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