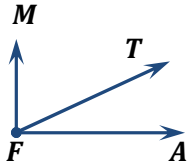


Measuring Angles Assignment

ANSWERS

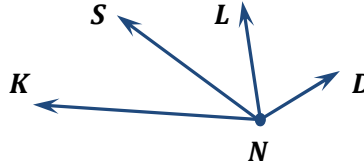
Name the angles in the figure.

1.



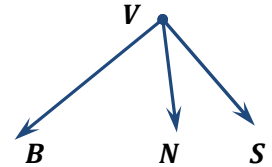
$\angle AFT$, $\angle AFM$ and $\angle TFM$

2.



$\angle KNS$, $\angle KNL$, $\angle KND$,
 $\angle SNL$, $\angle SND$, and $\angle LND$

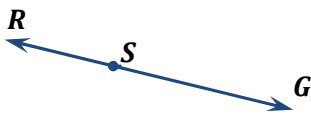
3.



$\angle BVN$, $\angle BVS$ and $\angle NVS$

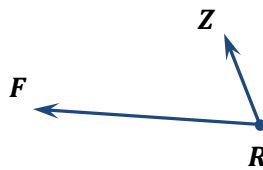
Name the vertex and sides of each angle.

4.



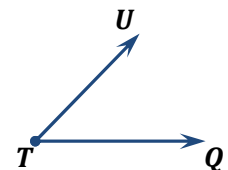
Vertex **S**
Sides \overline{SR} and \overline{SG}

5.



Vertex **R**
Sides \overline{RF} and \overline{RZ}

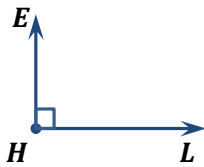
6.



Vertex **T**
Sides \overline{TQ} and \overline{TU}

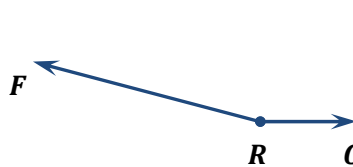
Classify the following angles as acute, right, obtuse, or straight.

7.



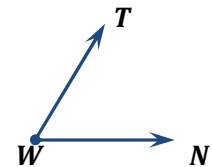
$\angle LHE$ is a right angle

8.



$\angle CRF$ is an obtuse angle

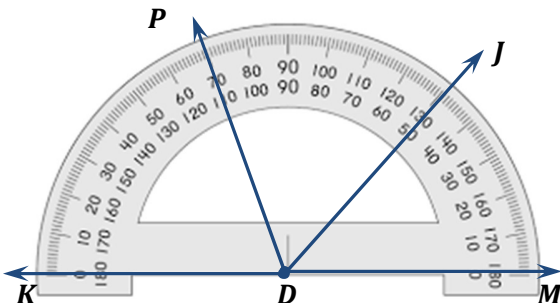
9.



$\angle NWT$ is an acute angle

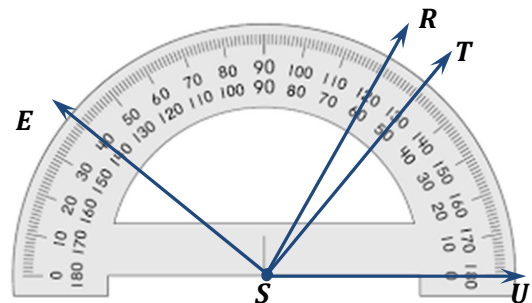
Find the measure of each angle.

10. $m\angle KDP$, $m\angle KDM$, $m\angle JDP$, $m\angle KDJ$ =?



$m\angle KDP = 70$
 $m\angle KDM = 180$
 $m\angle JDP = |130 - 70| = 60$
 $m\angle KDJ = 130$

11. $m\angle USE$, $m\angle UST$, $m\angle EST$, $m\angle RST$ =?

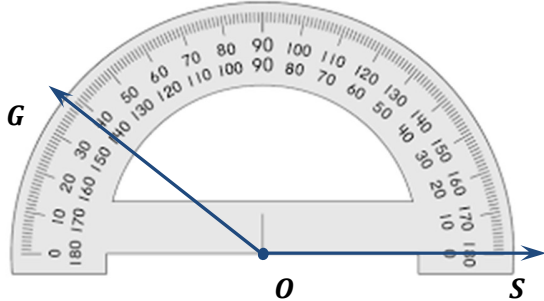


$m\angle USE = 140$
 $m\angle UST = 50$
 $m\angle EST = |140 - 50| = 90$
 $m\angle RST = |130 - 120| = 10$

Measuring Angles Assignment

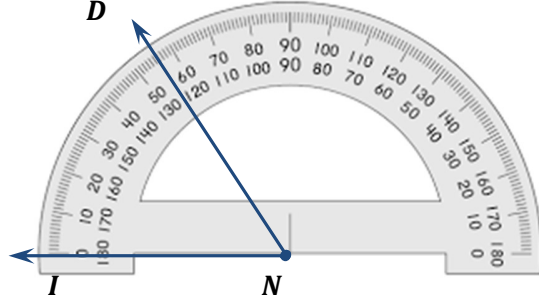
Use a protractor to draw each angle. Then classify each angle.

12. $m\angle SOG = 142$



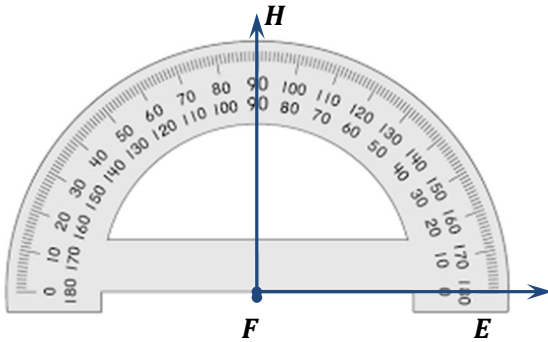
Obtuse angle

13. $m\angle IND = 55$



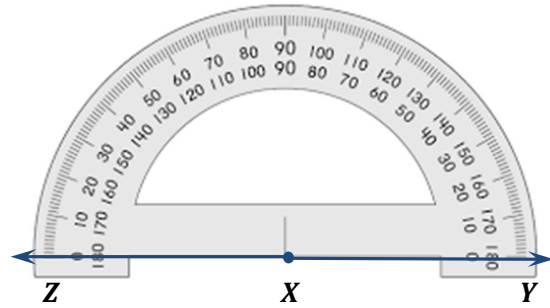
Acute angle

14. $m\angle EFH = 90$



Right angle

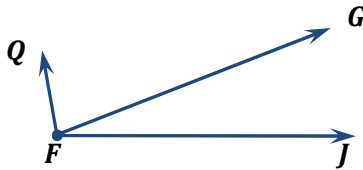
15. $m\angle ZXY = 180$



Straight angle

Find the indicated angle measures.

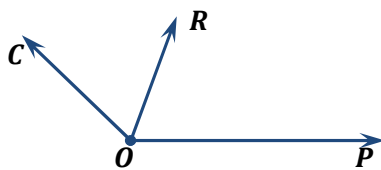
16. $m\angle JFG = 34$ $m\angle GFQ = 43$
 $m\angle JFQ = ?$



$m\angle JFG = 34$ $m\angle GFQ = 43$
 $m\angle JFQ = ?$

$m\angle JFQ = m\angle JFG + m\angle GFQ$
 $m\angle JFQ = 34 + 43$
 $m\angle JFQ = 77$

17. $m\angle POC = 132$ $m\angle ROC = 52$
 $m\angle POR = ?$



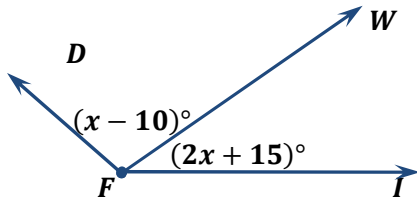
$m\angle POC = 132$ $m\angle ROC = 52$
 $m\angle POR = ?$

$m\angle POC = m\angle ROC + m\angle POR$
 $m\angle POR = m\angle POC - m\angle ROC$
 $m\angle POR = 132 - 52$
 $m\angle POR = 80$

Measuring Angles Assignment

Find the value of x and then the indicated angle measures.

16. If $m\angle IFD = 125$, $m\angle IFW = 2x + 15$, $m\angle WFD = x - 10$ what are $m\angle IFW$ and $m\angle WFD$?



$$\begin{aligned} m\angle IFD &= 125, \\ m\angle IFW &= 2x + 15, \\ m\angle WFD &= x - 10 \\ m\angle IFW &=? \quad m\angle WFD &=? \end{aligned}$$

$$m\angle IFD = m\angle IFW + m\angle WFD$$

$$125 = 2x + 15 + x - 10$$

$$125 = 3x + 5$$

$$125 - 5 = 3x + 5 - 5$$

$$120 = 3x$$

$$x = 40$$

$$m\angle IFW = 2x + 15$$

$$m\angle WFD = x - 10$$

$$m\angle IFW = 2 * 40 + 15$$

$$m\angle WFD = 40 - 10$$

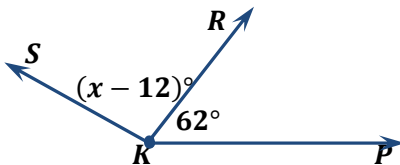
$$m\angle IFW = 80 + 15$$

$$m\angle WFD = 30$$

$$m\angle IFW = 95$$

$$m\angle WFD = 30$$

17. If $m\angle PKR = 62$, $m\angle RKS = x - 12$, and $m\angle PKS = 3x + 10$, what are $m\angle RKS$ and $m\angle PKS$?



$$m\angle PKR = 62$$

$$m\angle RKS = x - 12$$

$$m\angle PKS = 3x + 10$$

$$m\angle RKS =? \quad m\angle PKS =?$$

$$m\angle PKS = m\angle PKR + m\angle RKS$$

$$3x + 10 = 62 + x - 12$$

$$3x + 10 = 50 + x$$

$$3x + 10 - 10 = 50 + x - 10$$

$$3x = 40 + x$$

$$3x - x = 40 + x - x$$

$$2x = 40$$

$$x = 20$$

$$m\angle RKS = x - 12$$

$$m\angle PKS = 3x + 10$$

$$m\angle RKS = 20 - 12$$

$$m\angle PKS = 3 * 20 + 10$$

$$m\angle RKS = 8$$

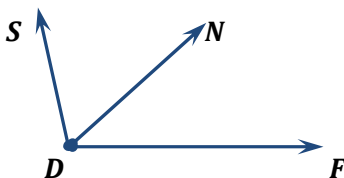
$$m\angle PKS = 60 + 10$$

$$m\angle RKS = 8$$

$$m\angle PKS = 70$$

Find the indicated angle measures.

18. If \overline{DN} bisects $\angle FDS$ and $m\angle FDS = 104$, find $m\angle FDN$ and $m\angle NDS$.



$$m\angle FDS = 104$$

$$m\angle FDN =? \quad m\angle NDS =?$$

$$m\angle FDS = m\angle FDN + m\angle NDS$$

$$m\angle FDN = m\angle NDS$$

$$m\angle FDS = 2 * m\angle NDS$$

$$m\angle NDS = \frac{m\angle FDS}{2}$$

$$m\angle NDS = \frac{104}{2}$$

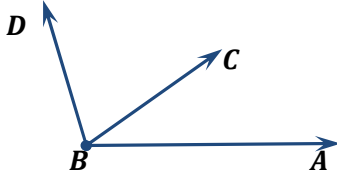
$$m\angle NDS = 52$$

$$m\angle FDN = m\angle NDS$$

$$m\angle FDN = 52$$

Measuring Angles Assignment

19. If \overrightarrow{BC} bisects $\angle ABD$ and $m\angle ABC = 51$, find $m\angle ABD$ and $m\angle CBD$.



$$m\angle ABC = 51$$

$$m\angle CBD = ? \quad m\angle ABD = ?$$

$$m\angle CBD = m\angle ABC$$

$$m\angle CBD = 51$$

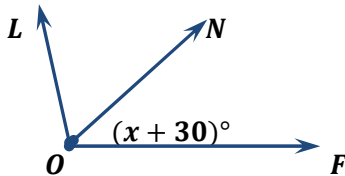
$$m\angle ABD = m\angle ABC + m\angle CBD$$

$$m\angle ABD = 51 + 51$$

$$m\angle ABD = 102$$

Find the value of x and then the indicated angle measures.

20. If \overrightarrow{ON} bisects $\angle FOL$ and $m\angle FOL = 4x - 10$, $m\angle FON = x + 30$, find $m\angle FON$, $m\angle FOL$ and $m\angle NOL$.



$$m\angle FOL = 4x - 10 \quad m\angle FON = x + 30$$

$$m\angle FON = ? \quad m\angle FOL = ? \quad m\angle NOL = ?$$

$$m\angle FOL = m\angle FON + m\angle NOL$$

$$m\angle FON = m\angle NOL$$

$$m\angle FOL = 2 * m\angle FON$$

$$4x - 10 = 2 * (x + 30)$$

$$4x - 10 = 2x + 60$$

$$4x - 10 + 10 = 2x + 60 + 10$$

$$4x = 2x + 70$$

$$4x - 2x = 2x - 2x + 70$$

$$2x = 70$$

$$x = 35$$

$$m\angle FON = x + 30$$

$$m\angle FON = 35 + 30$$

$$m\angle FON = 65$$

$$m\angle NOL = m\angle FON$$

$$m\angle NOL = 65$$

$$m\angle FOL = 4x - 10$$

$$m\angle FOL = 4 * 35 - 10$$

$$m\angle FOL = 140 - 10$$

$$m\angle FOL = 130$$