Measuring Angles Assignment

Name the angles in the figure.
1. \( \angle MTA \)
2. \( \angle SLD \)
3. \( \angle VSN \)

Name the vertex and sides of each angle.
4. \( \angle RSQ \)
5. \( \angle FZR \)
6. \( \angle UTQ \)

Classify the following angles as acute, right, obtuse, or straight.
7. \( \angle EHL \)
8. \( \angle FRC \)
9. \( \angle WTU \)

Find the measure of each angle.
10. \( \angle KDP, \angle KDM, \angle JDP, \angle KDJ = ? \)
11. \( \angle USE, \angle UST, \angle EST, \angle RST = ? \)
Measuring Angles Assignment

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

12. $m\angle SOG = 142$

13. $m\angle IND = 55$

14. $m\angle EFH = 90$

15. $m\angle XXY = 180$

Find the indicated angle measures.

16. $m\angle JFG = 34 \quad m\angle GFQ = 43$

$m\angle FQJ = ?$

17. $m\angle POC = 132 \quad m\angle ROC = 52$

$m\angle POR = ?$
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 \( m\angle WFD \)?

![Diagram of angles](image)

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

![Diagram of angles](image)

Find the indicated angle measures.

18. If \( \overline{DN} \) bisects \( \angle FDS \) and \( m\angle FDS = 104 \), find \( m\angle FDN \) and \( m\angle NDS \).
Measuring Angles Assignment

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

\[ \begin{align*}
D & \quad (x + 30)^\circ \\
C & \\
B & \quad A
\end{align*} \]

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

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

\[ \begin{align*}
L & \quad N \\
(\text{not drawn}) & \\
O & \quad F
\end{align*} \]
Measuring Angles Assignment

ANSWERS

Name the angles in the figure.

1. \(\angle AFT, \angle AFM \) and \( \angle TF M \)

2. \(\angle KNS, \angle KNL, \angle KND, \angle SNL, \) and \( \angle LND \)

3. \(\angle BVN, \angle BVS \) and \( \angle NVS \)

Name the vertex and sides of each angle.

4. Vertex \( S \)  
   Sides \( SR \) and \( SG \)

5. Vertex \( R \)  
   Sides \( RF \) and \( RZ \)

6. Vertex \( T \)  
   Sides \( TQ \) and \( TU \)

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

7. \(\angle LHE \) is right angle

8. \(\angle CRF \) is obtuse angle

9. \(\angle NWT \) is 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. $m\angle SOG = 142$

13. $m\angle IND = 55$

14. $m\angle EFH = 90$

15. $m\angle ZXY = 180$

Find the indicated angle measures.

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

   $m\angle JFG = ?$

   $m\angle JFQ = ?$

   $m\angle JFQ = m\angle JFG + m\angle GFQ$

   $m\angle JFQ = 34 + 43$

   $m\angle JFQ = 77$

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

   $m\angle POR = ?$

   $m\angle POR = m\angle POC + m\angle POR$

   $m\angle POR = m\angle POC - m\angle ROC$

   $m\angle POR = 132 - 52$

   $m\angle POR = 80$
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 $m\angle WFD$?

\[ m\angle IFD = 125, \quad m\angle IFW = 2x + 15, \quad m\angle WFD = x - 10 \]

\[ m\angle IFW = ? \quad m\angle WFD = ? \]

\[ m\angle IFD = m\angle IFW + m\angle WFD \]

\[ 125 = 2x + 15 + x - 10 \]

\[ 125 = 3x + 5 \]

\[ 125 - 5 = 3x + 5 - 5 \]

\[ 120 = 3x \]

\[ x = 40 \]

\[ m\angle IFW = 2x + 15 \quad m\angle WFD = x - 10 \]

\[ m\angle IFW = 2 \times 40 + 15 \quad m\angle WFD = 40 - 10 \]

\[ m\angle IFW = 80 + 15 \quad m\angle WFD = 30 \]

\[ m\angle IFW = 95 \quad m\angle WFD = 30 \]

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

\[ m\angle PKR = 62 \quad m\angle RKS = x - 12 \quad m\angle PKS = 3x + 10 \]

\[ m\angle RKS = ? \quad m\angle PKS = ? \]

\[ m\angle PKS = m\angle PKR + m\angle RKS \]

\[ 3x + 10 = 62 + x - 12 \]

\[ 3x + 10 = 50 + x \]

\[ 3x + 10 - 10 = 50 + x - 10 \]

\[ 3x = 40 + x \]

\[ 3x - x = 40 + x - x \]

\[ 2x = 40 \]

\[ x = 20 \]

\[ m\angle RKS = x - 12 \quad m\angle PKS = 3x + 10 \]

\[ m\angle RKS = 20 - 12 \quad m\angle PKS = 3 \times 20 + 10 \]

\[ m\angle RKS = 8 \quad m\angle PKS = 60 + 10 \]

\[ m\angle RKS = 8 \quad m\angle PKS = 70 \]

Find the indicated angle measures.

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

\[ m\angle DFS = 104 \]

\[ m\angle FDN = ? \quad m\angle NDS = ? \]

\[ m\angle FDN = m\angle NDS \]

\[ m\angle FDS = 2 \times m\angle NDS \]

\[ m\angle NDS = \frac{m\angle FDS}{2} \]

\[ m\angle NDS = \frac{104}{2} \]

\[ m\angle NDS = 52 \quad m\angle FDN = m\angle NDS \]

\[ m\angle FDN = 52 \]
Measuring Angles Assignment

19. If \( \overline{BC} \) bisects \( \angle ABD \) and \( m\angle ABC = 51 \), find \( m\angle ABD \) and \( m\angle CBD \).

\[
\begin{align*}
\text{Find the value of } x \text{ and then the indicated angle measures.}
\end{align*}
\]

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