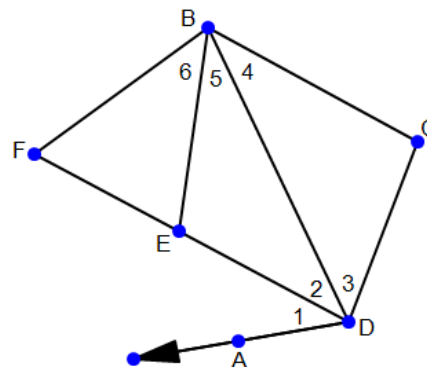


Name: _____

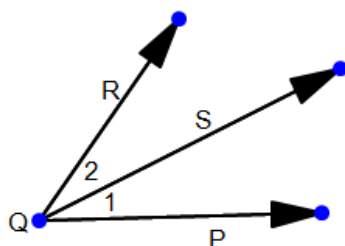
Adjacent Angles and Angle Bisector

In the figure below, $m\angle FDB = 85$, $m\angle DBA = 100$, $m\angle 2 = 30$, $m\angle 3 = 50$, $m\angle 4 = 25$, and $m\angle 5 = 40$. Find each measure.



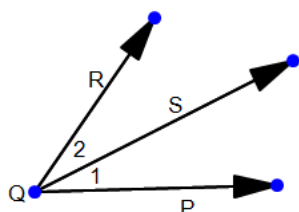
- 10) $m\angle EDC$
- 11) $m\angle 6$
- 12) $m\angle EBC$
- 13) $m\angle 1$
- 14) $m\angle FDC$

Find the indicated measure. (Show your way.)



- 15) Given: $m\angle 1 = \frac{2}{5}(m\angle 2)$, $m\angle PQR = 49$. Find $m\angle 1$.
- 16) Given: $m\angle 2 = \frac{3}{5}(m\angle 1)$, $m\angle PQR = 64$. Find $m\angle 2$.
- 17) Given: $m\angle 1$ is twice $m\angle 2$, $m\angle PQR = 78$. Find $m\angle 1$.

For Exercises 18-20, \overline{QS} bisects $\angle PQR$.



- 18) Given: $m\angle 1 = 4x + 30$, $m\angle 2 = 2x + 40$. Find $m\angle 1$.
- 19) Given: $m\angle 1 = 42 - 2x$, $m\angle 2 = 30 + 4x$. Find $m\angle PQR$.
- 20) Given: $m\angle 1 = 6x + 18$, $m\angle 2 = 9x$. Find $m\angle 1$.

Draw a figure then find the indicated measure.

21) $\angle AOT$ and $\angle TOG$ are adjacent angles, $m\angle AOG = 100$, and $m\angle AOT = 3(m\angle TOG)$. Find $m\angle TOG$.

22) \overline{OC} bisects $\angle AOB$, \overline{OD} bisects $\angle AOC$, \overline{OE} bisects $\angle AOD$, \overline{OF} bisects $\angle AOE$ and \overline{OG} bisects $\angle FOC$.

a) If $m\angle BOF = 120$, find $m\angle DOE$.

b) If $m\angle COG = 35$, find $m\angle EOG$