## Angle Word Problems Worksheets

1. Find the measure of $\angle C Q G$.

2. The ratio of the measures of a pair of adjacent angles on a line is $4: 5$. Find the measures of the two angles.
3. The ratio of the measures of three adjacent angles on a line is $3: 4: 5$. Find the measures of the three angles.

## Angle Word Problems Worksheets

1. Find the measure of $\angle C Q G$.

$\angle D Q E$ and $\angle C Q F$ are vertical angles and are of equal measurement. $\angle C Q G$ and $\angle G Q F$ are adjacent angles and their measures sum to the measure of $\angle C Q F$

$$
\begin{aligned}
3 x+56 & =155 \\
3 x+56-56 & =155-56 \\
3 x & =99 \\
\left(\frac{1}{3}\right) 3 x & =\left(\frac{1}{3}\right) 99 \\
x & =33 \\
m \angle C Q G & =3\left(33^{\circ}\right)=99^{\circ}
\end{aligned}
$$

2. The ratio of the measures of a pair of adjacent angles on a line is $4: 5$. Find the measures of the two angles.
$\angle 1=4 x, \angle 2=5 x$

$$
\begin{aligned}
4 x+5 x & =180 \\
9 x & =180 \\
\left(\frac{1}{9}\right) 9 x & =\left(\frac{1}{9}\right) 180 \\
x & =20
\end{aligned}
$$

$$
\begin{aligned}
& \angle 1=4\left(20^{\circ}\right)=80^{\circ} \\
& \angle 2=5\left(20^{\circ}\right)=100^{\circ}
\end{aligned}
$$

3. The ratio of the measures of three adjacent angles on a line is $3: 4: 5$.

Find the measures of the three angles.

$$
\begin{aligned}
& \angle 1=3 x, \angle 2=4 x, \angle 3=5 x \\
& 3 x+4 x+5 x=180 \\
& 12 x=180 \\
& \left(\frac{1}{12}\right) 12 x=\left(\frac{1}{12}\right) 180 \\
& x=15
\end{aligned} \quad \begin{aligned}
\angle 1=3\left(15^{\circ}\right)=45^{\circ} \\
\angle 2=4\left(15^{\circ}\right)=60^{\circ} \\
\angle 3=5\left(15^{\circ}\right)=75^{\circ}
\end{aligned}
$$

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