## Angle Word Problems Worksheets

1. Find the measures of $\angle H Q E$ and $\angle A Q G$.

2. The sum of the measures of two adjacent angles is $72^{\circ}$. The ratio of the smaller angle to the larger angle is $1: 3$. Find the measures of each angle.
3. Find the measures of $\angle C Q A$ and $\angle E Q B$.


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## Angle Word Problems Worksheets

1. Find the measures of $\angle H Q E$ and $\angle A Q G$.


$$
\begin{aligned}
& 2 y+21+y=90 \\
& 3 y+21=90 \\
& 3 y+21-21=90-21 \\
& 3 y=69 \\
&\left(\frac{1}{3}\right) 3 y=\left(\frac{1}{3}\right) 69 \\
& y=23 \\
& m \angle H Q E=2\left(23^{\circ}\right)=46^{\circ} \\
& m \angle A Q G=\left(23^{\circ}\right)=23^{\circ}
\end{aligned}
$$

2. The sum of the measures of two adjacent angles is $72^{\circ}$. The ratio of the smaller angle to the larger angle is $1: 3$. Find the measures of each angle.

$$
\begin{gathered}
\angle A=x, \angle B=3 x \\
x+3 x=72 \\
4 x=72 \\
\left(\frac{1}{4}\right)(4 x)=\left(\frac{1}{4}\right)(72) \\
x=18 \\
\angle A=\left(18^{\circ}\right)=18^{\circ} \\
\angle B=3\left(18^{\circ}\right)=54^{\circ}
\end{gathered}
$$

3. Find the measures of $\angle C Q A$ and $\angle E Q B$.


$$
\begin{aligned}
4 x+5 x & =108 \\
9 x & =108 \\
\left(\frac{1}{9}\right) 9 x & =\left(\frac{1}{9}\right) 108 \\
x & =12 \\
m \angle C Q A & =5\left(12^{\circ}\right)=60^{\circ} \\
m \angle E Q B & =4\left(12^{\circ}\right)=48^{\circ}
\end{aligned}
$$

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