## Angle Word Problems Worksheets

Write and solve an equation in each of the problems.

1. Thomas is putting in a tile floor. He needs to determine the angles that should be cut in the tiles to fit in the corner. The angle in the corner measures $90^{\circ}$. One piece of the tile will have a measure of $24^{\circ}$. Write an equation, and use it to determine the measure of the unknown angle.
2. Aram has been studying the mathematics behind pinball machines. He made the following diagram of one of his observations. Determine the measure of the missing angle.

3. The measures of two angles have a sum of $180^{\circ}$. The measures of the angles are in a ratio of $5: 1$. Determine the measures of both angles.

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$$
\begin{aligned}
x^{\circ}+24^{\circ} & =90^{\circ} \\
x^{\circ}+24^{\circ}-24^{\circ} & =90^{\circ}-24^{\circ} \\
x^{\circ} & =66^{\circ}
\end{aligned}
$$

The measure of the unknown angle is $66^{\circ}$.
2. Aram has been studying the mathematics behind pinball machines. He made the following diagram of one of his observations. Determine the measure of the missing angle.


$$
\begin{aligned}
& 52^{\circ}+x^{\circ}+68^{\circ}=180^{\circ} \\
& 120^{\circ}+x^{\circ}=180^{\circ} \\
& 120^{\circ}+x^{\circ}-120^{\circ}=180^{\circ}-120^{\circ} \\
& x^{\circ}=60^{\circ}
\end{aligned}
$$

The measure of the missing angle is $60^{\circ}$.
3. The measures of two angles have a sum of $180^{\circ}$. The measures of the angles are in a ratio of $5: 1$. Determine the measures of both angles.

$$
\begin{aligned}
& 5 x^{\circ}+x^{\circ}=180^{\circ} \\
& 6 x^{\circ}=180^{\circ} \\
& \frac{6 x^{\circ}}{6}=\frac{180}{6} \\
& x^{\circ}=30^{\circ}
\end{aligned}
$$

The angles measure $30^{\circ}$ and $150^{\circ}$.

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