## Angle Word Problems Worksheets

Write and solve an equation in each of the problems.

1. Jaxon is creating a mosaic design on a rectangular table. He has added two pieces to one of the corners. The first piece has an angle measuring $38^{\circ}$ and is placed in the corner. A second piece has an angle measuring $27^{\circ}$ and is also placed in the corner. Draw a diagram to model the situation. Then, write an equation, and use it to determine the measure of the unknown angle in a third piece that could be added to the corner of the table.
2. Alejandro is repairing a stained glass window. He needs to take it apart to repair it. Before taking it apart, he makes a sketch with angle measures to put it back together. Write an equation, and use it to determine the measure of the unknown angle.


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$$
\begin{aligned}
& x^{\circ}+38^{\circ}+27^{\circ}=90^{\circ} \\
& x^{\circ}+65^{\circ}=90^{\circ} \\
& x^{\circ}+65^{\circ}-65^{\circ}=90^{\circ}-65^{\circ} \\
& x^{\circ}=25^{\circ}
\end{aligned}
$$

The measure of the unknown angle is $25^{\circ}$.
2. Alejandro is repairing a stained glass window. He needs to take it apart to repair it. Before taking it apart, he makes a sketch with angle measures to put it back together. Write an equation, and use it to determine the measure of the unknown angle.


$$
\begin{gathered}
40^{\circ}+x^{\circ}+30^{\circ}=180^{\circ} \\
x^{\circ}+40^{\circ}+30^{\circ}=180^{\circ} \\
x^{\circ}+70^{\circ}=180^{\circ} \\
x^{\circ}+70^{\circ}-70^{\circ}=180^{\circ}-70^{\circ} \\
x^{\circ}=110^{\circ}
\end{gathered}
$$

The missing angle measures $110^{\circ}$.

