

Questions

**Angle Bisector:** A line, ray, or segment that divides an  $\angle$  into 2  $\cong$  parts.

**Example 5:**

$\overline{MO}$  bisects  $\angle LMN$ ,  $m\angle LMO = 6x - 20$ , and  $m\angle NMO = 2x + 36$ . Find  $m\angle LMN$ .

$\overline{OA}$  bisects the  $\angle$



$$\begin{array}{r} 6x - 20 = 2x + 36 \\ + 20 \qquad + 20 \\ \hline \end{array}$$

$$\begin{array}{r} 6x = 2x + 56 \\ - 2x \quad - 2x \\ \hline \end{array}$$

$$\frac{4x}{4} = \frac{56}{4} \quad x = 14$$

$$m\angle LMN = 64 + 64 = 128^\circ$$



$$\begin{aligned} 6(14) - 20 &= 64 \\ 2(14) + 36 &= 64 \end{aligned}$$

Summary: