

Name : \_\_\_\_\_

## Proving Distributive Property of Multiplication

Fill in the blanks to solve each problem below using the distributive property.

$$\begin{aligned}\text{Solved Example: } 8 \times 9 &= \underline{72} \\ &= \underline{8} \times (\underline{3} + \underline{6}) = (\underline{8} \times \underline{3}) + (\underline{8} \times \underline{6}) \\ &= \underline{24} + \underline{48} \\ &= \underline{72}\end{aligned}$$

$$\begin{aligned}\textcircled{1} \quad 2 \times 16 &= \underline{\quad} \\ &= \underline{\quad} \times (\underline{\quad} + \underline{\quad}) \\ &= (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) \\ &= \underline{\quad} + \underline{\quad} \\ &= \underline{\quad}\end{aligned}$$

$$\begin{aligned}\textcircled{2} \quad 3 \times 18 &= \underline{\quad} \\ &= \underline{\quad} \times (\underline{\quad} + \underline{\quad}) \\ &= (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) \\ &= \underline{\quad} + \underline{\quad} \\ &= \underline{\quad}\end{aligned}$$

$$\begin{aligned}\textcircled{3} \quad 17 \times 6 &= \underline{\quad} \\ &= \underline{\quad} \times (\underline{\quad} + \underline{\quad}) \\ &= (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) \\ &= \underline{\quad} + \underline{\quad} \\ &= \underline{\quad}\end{aligned}$$

$$\begin{aligned}\textcircled{4} \quad 4 \times 12 &= \underline{\quad} \\ &= \underline{\quad} \times (\underline{\quad} + \underline{\quad}) \\ &= (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) \\ &= \underline{\quad} + \underline{\quad} \\ &= \underline{\quad}\end{aligned}$$

$$\begin{aligned}\textcircled{5} \quad 12 \times 4 &= \underline{\quad} \\ &= \underline{\quad} \times (\underline{\quad} + \underline{\quad}) \\ &= (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) \\ &= \underline{\quad} + \underline{\quad} \\ &= \underline{\quad}\end{aligned}$$

$$\begin{aligned}\textcircled{6} \quad 14 \times 8 &= \underline{\quad} \\ &= \underline{\quad} \times (\underline{\quad} + \underline{\quad}) \\ &= (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) \\ &= \underline{\quad} + \underline{\quad} \\ &= \underline{\quad}\end{aligned}$$

# Proving Distributive Property of Multiplication

## Answers

$$\begin{aligned}\text{Solved Example: } 8 \times 9 &= \underline{72} \\ &= \underline{8} \times (\underline{3} + \underline{6}) = (\underline{8} \times \underline{3}) + (\underline{8} \times \underline{6}) \\ &= \underline{24} + \underline{48} \\ &= \underline{72}\end{aligned}$$

$$\begin{aligned}\textcircled{1} \quad 2 \times 16 &= \underline{32} \\ &= \underline{2} \times (\underline{10} + \underline{6}) \\ &= (\underline{2} \times \underline{10}) + (\underline{2} \times \underline{6}) \\ &= \underline{20} + \underline{12} \\ &= \underline{32}\end{aligned}$$

$$\begin{aligned}\textcircled{2} \quad 3 \times 18 &= \underline{54} \\ &= \underline{3} \times (\underline{10} + \underline{8}) \\ &= (\underline{3} \times \underline{10}) + (\underline{3} \times \underline{8}) \\ &= \underline{30} + \underline{24} \\ &= \underline{54}\end{aligned}$$

$$\begin{aligned}\textcircled{3} \quad 17 \times 6 &= \underline{102} \\ &= \underline{17} \times (\underline{4} + \underline{2}) \\ &= (\underline{17} \times \underline{4}) + (\underline{17} \times \underline{2}) \\ &= \underline{68} + \underline{34} \\ &= \underline{102}\end{aligned}$$

$$\begin{aligned}\textcircled{4} \quad 4 \times 12 &= \underline{48} \\ &= \underline{4} \times (\underline{10} + \underline{2}) \\ &= (\underline{4} \times \underline{10}) + (\underline{4} \times \underline{2}) \\ &= \underline{40} + \underline{8} \\ &= \underline{48}\end{aligned}$$

$$\begin{aligned}\textcircled{5} \quad 12 \times 4 &= \underline{48} \\ &= \underline{12} \times (\underline{2} + \underline{2}) \\ &= (\underline{12} \times \underline{2}) + (\underline{12} \times \underline{2}) \\ &= \underline{24} + \underline{24} \\ &= \underline{48}\end{aligned}$$

$$\begin{aligned}\textcircled{6} \quad 14 \times 8 &= \underline{112} \\ &= \underline{14} \times (\underline{6} + \underline{2}) \\ &= (\underline{14} \times \underline{6}) + (\underline{14} \times \underline{2}) \\ &= \underline{84} + \underline{28} \\ &= \underline{112}\end{aligned}$$