

## The Distributive Property

1. Simplify each expression.

a)  $3(x+4) + x$

b)  $-3(x+4) + x$

c)  $5x + 2(3-x)$

d)  $5x - 2(3-x)$

e)  $3(x-4) + 4(x+1)$

f)  $-3(x-4) - 4(x+1)$

g)  $4 - (x-2) + (x+1)$

h)  $-3 - 2(x-3) - 3x$

i)  $7a - 4 - (-2a - 3)$

j)  $3a - 2x - (-3x + a)$

# The Distributive Property

1. Simplify each expression.

$$\begin{aligned} \text{a) } & 3(x+4) + x \\ & 3x + 12 + x \\ & \boxed{4x + 12} \end{aligned}$$

$$\begin{aligned} \text{b) } & -3(x+4) + x \\ & -3x - 12 + x \\ & \boxed{-2x - 12} \end{aligned}$$

$$\begin{aligned} \text{c) } & 5x + 2(3-x) \\ & 5x + 6 - 2x \\ & \boxed{3x + 6} \end{aligned}$$

$$\begin{aligned} \text{d) } & 5x - 2(3-x) \\ & 5x - 6 + 2x \\ & \boxed{7x - 6} \end{aligned}$$

$$\begin{aligned} \text{e) } & 3(x-4) + 4(x+1) \\ & 3x - 12 + 4x + 4 \\ & \boxed{7x - 8} \end{aligned}$$

$$\begin{aligned} \text{f) } & -3(x-4) - 4(x+1) \\ & -3x + 12 - 4x - 4 \\ & \boxed{-7x + 8} \end{aligned}$$

$$\begin{aligned} \text{g) } & 4 - (x-2) + 1(x+1) \\ & 4 - x + 2 + x + 1 \\ & 4 + 2 + 1 \\ & \boxed{7} \end{aligned}$$

$$\begin{aligned} \text{h) } & -3 - 2(x-3) - 3x \\ & -3 - 2x + 6 - 3x \\ & \boxed{-5x + 3} \end{aligned}$$

$$\begin{aligned} \text{i) } & 7a - 4 - (-2a - 3) \\ & 7a - 4 + 2a + 3 \\ & \boxed{9a - 1} \end{aligned}$$

$$\begin{aligned} \text{j) } & 3a - 2x - (-3x + a) \\ & 3a - 2x + 3x - a \\ & \boxed{2a + x} \end{aligned}$$