

# Simplifying Expressions

Simplify each expression using the Commutative property and Associative property

$$\begin{aligned} 1) & (6a - 4b) + 2a \\ & = 6a + 2a - 4b \\ & = 8a - 4b \end{aligned}$$

$$\begin{aligned} 2) & 15 * 2d * 4 \\ & = (15 * 4) * 2d \\ & = 60 * 2d \\ & = 120d \end{aligned}$$

$$\begin{aligned} 3) & (6b + 2c) + (2b - c) \\ & = (6b + 2b) + (2c - c) \\ & = 8b + c \end{aligned}$$

$$\begin{aligned} 4) & 6m + (2n - 4m) \\ & = (6m - 4m) + 2n \\ & = 2m + 2n \end{aligned}$$

$$\begin{aligned} 5) & (2x - 7y) + (10y - x) \\ & = (2x - x) + (-7y + 10y) \\ & = x + 3y \end{aligned}$$

$$\begin{aligned} 6) & 4q - 7r - 5q \\ & = 4q - 5q - 7r \\ & = -q - 7r \end{aligned}$$

$$\begin{aligned} 7) & (10s * 5) * 2 \\ & = 10s * (5 * 2) \\ & = 10s * 10 \\ & = 100s \end{aligned}$$

$$\begin{aligned} 8) & 3 * 9t * 7 \\ & = 3 * 7 * 9t \\ & = 21 * 9t \\ & = 189t \end{aligned}$$

$$\begin{aligned} 9) & 4z + 8a - 6z + 7a \\ & = 4z - 6z + 8a + 7a \\ & = -2z + 15a \end{aligned}$$

$$\begin{aligned} 8) & (20s * 5) * 2 \\ & = 20s * (5 * 2) \\ & = 20s * 10 \\ & = 200s \end{aligned}$$

$$\begin{aligned} 9) & 15m + (7n - 8m) \\ & = (15m - 8m) + 7n \\ & = 7m + 7n \end{aligned}$$

$$\begin{aligned} 10) & (5x - 6y) + (10y - 3x) \\ & = (5x - 3x) + (-6y + 10y) \\ & = 2x + 4y \end{aligned}$$

$$\begin{aligned} 11) & (9b + 4c) + (4b - 2c) \\ & = (9b + 4b) + (4c - 2c) \\ & = 13b + 2c \end{aligned}$$

$$\begin{aligned} 12) & 16q - 14r - 10q \\ & = 16q - 10q - 14r \\ & = 6q - 14r \end{aligned}$$