

# Simplifying Expressions



Simplify each expression using the three property

$$\begin{aligned} 1) \quad & 2 | (6 + 3|) - | (| - 6) \\ & = 12 | + 6 |^2 - |^2 + 6| \\ & = 5 | + 18 | \end{aligned}$$

$$\begin{aligned} 2) \quad & \frac{4m - 2n}{2} + 4(2m + 6n) \\ & = 2m - n + 8m + 24n \\ & = 10m + 23n \end{aligned}$$

$$\begin{aligned} 3) \quad & -(2b - 10c) - 5(5b - 2c) \\ & = -2b + 10c - 25b + 10c \\ & = -27b + 20c \end{aligned}$$

$$\begin{aligned} 4) \quad & p(9q - 5r) - 3(2p - 6pq) \\ & = 9pq - 5pr - 6p + 18pq \\ & = 27pq - 5pr - 6p \end{aligned}$$

$$\begin{aligned} 5) \quad & 4p + (6rq - 4rp + p) - 10rp \\ & = 4p + 6rq - 4rp + p - 10rp \\ & = 5p + 6rq - 14rp \end{aligned}$$

$$\begin{aligned} 6) \quad & (19x - 8y) + (6y - 9x + 10) \\ & = 19x - 8y + 6y - 9x + 10 \\ & = 10x - 2y + 10 \end{aligned}$$

$$\begin{aligned} 7) \quad & 10v(9v - 10 - 10v) \\ & = 90v^2 - 100 - 100v^2 \\ & = -10v^2 - 100 \end{aligned}$$

$$\begin{aligned} 8) \quad & -s(7s - 9t) - 2s(2t - 7) \\ & = -7s^2 + 9st - 4st + 14s \\ & = -7s^2 + 5st + 14s \end{aligned}$$

$$\begin{aligned} 9) \quad & a(7b + 4c) 2(8a - 2bc) \\ & = 7ab + 4ac - 16a + 4bc \\ & = -16a + 7ab + 4ac + 4bc \end{aligned}$$

$$\begin{aligned} 10) \quad & 10p - (4q + 6p - 10) \\ & = 10p - 4q - 6p + 10 \\ & = 4p - 4q + 10 \end{aligned}$$

$$\begin{aligned} 11) \quad & (6t - 9s)3 - 2(3t + 3s) \\ & = 18t - 27s - 6t - 6s \\ & = 12t - 33s \end{aligned}$$

$$\begin{aligned} 12) \quad & 6s(2t + 3) - 2t(4s - 10) \\ & = 12st + 18s - 8st + 20t \\ & = 4st + 18s + 20t \end{aligned}$$

$$\begin{aligned} 13) \quad & \frac{6b + 10 - 4e}{2} - \frac{10b + 5e - 20}{5} \\ & = 3b + 5 - 2e - 2b - e + 4 \\ & = b - 3e + 9 \end{aligned}$$

