

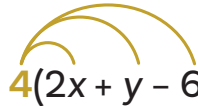
# Expanding Linear Expressions Using the Distributive Property



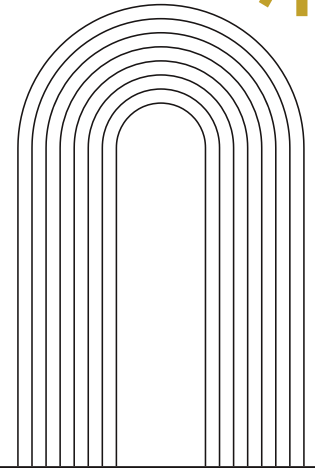
You can use the **distributive property** to expand expressions that are written as products.



Expand  $4(2x + y - 6)$ .



$$\begin{aligned} 4(2x + y - 6) &= 4(2x) + 4(y) + 4(-6) && \text{Multiply each term inside} \\ &= 8x + 4y - 24 && \text{the parentheses by 4.} \\ &&& \text{Simplify.} \end{aligned}$$



Expand each expression. Write the simplified expression on the blank.

$3(a + 7) = \underline{3a + 21}$

$9(-4t + 3) = \underline{-36t + 27}$

$-5(2y - 5) = \underline{-10y + 25}$

$6(3b - 7) = \underline{18b - 42}$

$-7(4q + 10r - 8) = \underline{-28q - 70r + 56}$

$4(-8f - 5g + 3) = \underline{-32f - 20g + 12}$

$6(x + 4 - 6y) = \underline{6x + 24 - 36y}$

$2(11b - 14c + 25) = \underline{22b - 28c + 50}$

$3(1.2y + 0.8) = \underline{3.6y + 2.4}$

$-0.9(9m - 0.5) = \underline{-8.1m + 0.45}$

$\frac{1}{3}(6g + 15) = \underline{2g + 5}$

$\frac{3}{4}(-12r - 8) = \underline{-9r - 6}$

$-3(0.6t + 0.2u - 8) = \underline{-1.8t - 0.6u + 24}$

$\frac{2}{5}(a - 10b + 5) = \underline{\frac{2}{5}a - 4b + 2}$

$-0.8(-0.6c + 1.2d + 4) = \underline{0.48c - 0.96d - 3.2}$

$-\frac{2}{3}(6x - y + 12) = \underline{-4x + \frac{2}{3}y - 8}$