

## Practice: Add and Subtract Polynomials

- Which expression represents the result of simplifying  $(3x - 4) + (2x + 1)$ ?  
 A  $6x - 4$       B  $6x + 4$   
 C  $5x + 3$       D  $5x - 3$
- Remove brackets and collect like terms. Then, simplify.
  - $(x + 3) + (x + 5)$
  - $(2y - 5) + (y + 9)$
  - $(5m + 1) + (2m + 2)$
  - $(3 - 4d) + (d - 1)$
  - $(3v - 2) + (6 - v)$
  - $(k + 4) + (2 - 3k) + (6k - 1)$
  - $(2p + 4) + (p - 2) + (8 - 3p)$
  - $(3 - r) + (4 + 5r) + (2r - 1)$
- Write the opposite of each expression.
  - 3      b) -5
  - $2p$       d)  $-x$
  - $m + 4$       f)  $3b - 1$
  - $x^2 + 2x - 4$       h)  $-6 - y^2$
- Which expression represents the result of simplifying  $(4x - 1) - (x + 1)$ ?  
 A  $5x + 2$       B  $3x - 2$   
 C  $5x$       D  $3x$
- Add the opposite. Then, simplify.
  - $(4d - 2) - (d + 1)$
  - $(3x - 4) - (x + 3)$
  - $(2p + 5) - (3p + 2)$
  - $(8 - 4m) - (m - 2)$
  - $(a - 2) - (5 - 3a)$
  - $(z + 7) - (4 - z)$
  - $(p + 1) - (p - 2)$
  - $(5 - 2b) - (6 + 4b)$
- Simplify.
  - $(6k - 4) + (2k + 4)$
  - $(n + 3) + (3n - 5)$
  - $(2a + 1) - (4a + 2)$
  - $(5 - 3m) + (2m - 1)$
  - $(b - 6) - (2 - 5b) + (b + 4)$
  - $(x + 2) - (1 - x) - (5 + x)$
  - $(g + 12) + (g - 7) - (2 - 3g)$
  - $(1 - b) + (3 + 2b) - (b - 8)$
- Simplify.
  - $(x^2 + 2x + 1) + (2x^2 + 4)$
  - $(4a + 3b - 6) + (2a - b + 4)$
  - $(2m^2 + m + 12) + (3m^2 + 4m - 6)$
  - $(5n + mn - 3m) + (2m - 5mn + n)$
- A rectangle has length  $4x + 1$  and width  $x + 2$ .
  - Write a simplified expression for the perimeter of the rectangle.
  - Find the perimeter of the rectangle when  $x = 5$ .
- Three artists contributed to a coffee-table book. They each chose to be paid a different way.
 

Artist	Fixed Rate (\$)	Royalty (\$ per $n$ books sold)
Ayesha	1000	$2n$
Jorge	-	$5n$
Ioana	4000	-

  - Write an expression for the total earnings for each artist.
  - Write a simplified expression for the total amount paid to Ayesha, Jorge, and Ioana.