

Simplifying Algebraic Expressions and the Distributive Property

1. $x(x + 3)$

$x^2 + 3x$

2. $y(x - y^2)$

$xy - y^3$

3. $2(3 - 4y)$

$6 - 8y$

4. $x(x^2 + 4x - 3)$

$x^3 + 4x^2 - 3x$

5. $2(3p + 2) + 3(2p - 3)$

$6p + 4 + 6p - 9$

$12p - 5$

⑦ $n^4 + \cancel{n^3} + \cancel{3n} - \cancel{n} - \cancel{n^2}$

$n^4 + 2n$

⑩ $\cancel{2h^2} + \cancel{3g} - \cancel{2h^2} + \cancel{2^2} - 3 + 4g$

$7g + 1$

6. $(4x + 15) + (21x - 12)$

$4x + 15 + 21x - 12$

$25x + 3$

$(12x)^2$

7. $(7x + 8) - (3x + 12)$

$7x + 8 - 3x - 12$

$4x - 4$

8. $(12x^2 - 7) - (-3x^2 + 2)$

$12x^2 - 7 + 3x^2 - 2$

$15x^2 - 9$

9. $7(p + 2) - 3(2p - 3)$

$7p + 14 - 6p + 9$

$p + 14 + 9$

$p + 23$

10. $2(3x + 1) - (2x - 3)$

$6x + 2 - 2x + 3$

$4x + 5$

11. $x(x^2 - 2y) - 3x^2(x + 2y)$

$x^3 - 2xy - 3x^3 - 6x^2y$
 $-2x^3 - 2xy - 6x^2y$

13. $a(a + 2b - 3c) + 3c(a - 2b + 3c) - 2b(a - b - 3c)$

$a^2 + 2ab - 3ac + 3ac - 6bc + 9c^2 - 2ab + 2b^2 + 6bc$

$a^2 + 2b^2 + 9c^2$

$$\begin{aligned} & 4(5x+2) - (3x-4) \\ & \underline{20x} (+8) - \underline{3x} (+4) \\ & 17x + 12 \end{aligned}$$

Jill and Kelly work as consultants and get paid per project. Jill is paid a project fee of \$25 plus \$10 per hour. Kelly is paid a project fee of \$18 plus \$14 per hour. Write an expression to represent how much a company will pay to hire both consultants for a project.

Marc is sellign tickets for a concert. Adult tickets cost \$16.60 and children's tickets cost \$12.20. He gets to keep 25% of the money from ticket sales. Write an expression to represent how much money Marc gets to keep.

HW: WB p. 37