

Multiplying and Dividing Polynomials Worksheet Answer Key

Poly Want a Cracker?

$$\begin{aligned} 1. & (3x - 4)(2x + 2) \\ &= (3x - 4)(2x) + (3x - 4)(2) \\ &= 6x^2 - 8x + 6x - 8 \\ &= 6x^2 - 2x - 8 \end{aligned}$$

$$\begin{aligned} 2. & (4a + b)6 \\ &= 24a + 6b \end{aligned}$$

$$\begin{aligned} 3. & (4x + c)(3y + 2) \\ &= (4x + c)(3y) + (4x + c)(2) \\ &= 12xy + 3cy + 8x + 2c \end{aligned}$$

$$\begin{aligned} 4. & (9x + y)(-4x + 3) \\ &= (9x + y)(-4x) + (9x + y)(3) \\ &= -36x^2 - 4xy + 27x + 3y \end{aligned}$$

$$\begin{aligned} 5. & 2(6a + 4)(2a + 3) \\ &= (12a + 8)(2a + 3) \\ &= (12a + 8)(2a) + (12a + 8)(3) \\ &= 24a^2 + 16a + 36a + 24 \\ &= 24a^2 + 52a + 24 \end{aligned}$$

$$\begin{aligned} 6. & \frac{-3x^3b^2}{4ab^2} \\ &= \frac{-3x^3}{4a} \end{aligned}$$

$$\begin{aligned} 7. & \frac{-4x^2b^3}{2xb} \\ &= \frac{-4xb^2}{2} = -2xb^2 \end{aligned}$$

$$\begin{aligned} 8. & \frac{-3x^2y^2}{-4xy} \\ &= \frac{-3xy}{4} \end{aligned}$$

$$\begin{aligned} 9. & \frac{6x^2y^2 + 5xy}{30xy} \\ &= \frac{6x^2y^2}{30xy} + \frac{5xy}{30xy} \\ &= \frac{xy}{5} + \frac{1}{6} \end{aligned}$$

$$\begin{aligned} 10. & \frac{3a^2b^3 + 3ab}{9ab} \\ &= \frac{3a^2b^3}{9ab} + \frac{3ab}{9ab} \\ &= \frac{ab^2}{3} + \frac{1}{3} \\ &= \frac{ab^2 + 1}{3} \end{aligned}$$

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