



## 11. Refuerza: extracción de factor común

### Soluciones

**1** Completa.

$$3x + 3y = 3 \cdot (x + y)$$

$$6x^2 + 6y^2 = 6 \cdot (x^2 + y^2)$$

$$3x - x^2 = 3x - x \cdot x = x \cdot (3 - x)$$

$$2a + a^2 = 2a + a \cdot a = a \cdot (2 + a)$$

$$4ab^2 + 6b^3 = 2 \cdot 2ab^2 + 2 \cdot 3 \cdot b \cdot b^2 = 2b^2 \cdot (2a + 3b)$$

$$10x^2 - 5x^3 = 2 \cdot 5x^2 - 5x \cdot x^2 = 5x^2 \cdot (2 - x)$$

**2** Completa sacando factor común.

$$3a^2 + 9ab = \boxed{3a} \cdot a + \boxed{3a} \cdot 3b = 3a \cdot (a + 3b)$$

$$x^2 + 5x^3 = x^2 + x^2 \cdot 5x = x^2 \cdot (1 + 5x)$$

$$12x^2y + 18xy^2 = 6xy \cdot 2x + 6xy \cdot 3y = 6xy \cdot (2x + 3y)$$

$$6a^2 + 15ab = 3a(2a + 5b)$$

$$4x^4 + 12x^3 = 4x^3(x + 3)$$

$$3a^2b^2 + 3a^3b + 3a^2b = 3a^2b(b + a + 1)$$

**3** Saca factor común y simplifica.

$$\frac{3x + xy}{x^2} = \frac{\cancel{x} \cdot (3 + y)}{\cancel{x} \cdot x} = \frac{3 + y}{x}$$

$$\frac{15a}{5a + 10b} = \frac{\cancel{5} \cdot 3a}{\cancel{5} \cdot (a + 2b)} = \frac{3a}{a + 2b}$$

$$\frac{x^2 + x}{2x^2 + 2x} = \frac{\cancel{x} \cdot (\cancel{x} + 1)}{2\cancel{x} \cdot (\cancel{x} + 1)} = \frac{1}{2}$$

$$\frac{3a - 3}{5a - 5} = \frac{3(\cancel{a} - 1)}{5(\cancel{a} - 1)} = \frac{3}{5}$$