

Actividades 4ta Unidad Lección 3

$$1. \frac{2x + 4}{x + y} \cdot \frac{x^2 - y^2}{4x + 8} = \frac{2(x + 2)}{x + y} \cdot \frac{(x + 4)(x - y)}{4(x + 2)} = \frac{x - y}{2}$$

$$\frac{2(x + 2)}{x + y} \cdot \frac{x^2 - y^2}{4(x + 2)} = \frac{2(x + 2)}{x + y} \cdot \frac{(x + 4)(x - y)}{4(x + 2)} = \frac{x - y}{2}$$

$$\frac{x - y}{2}$$

$$2. \frac{y^2 + 8y + 15}{y^2 - 25} \cdot \frac{4y - 20}{y^2} = \frac{(y + 3)(y + 5)}{(y + 5)(y - 5)} \cdot \frac{4(y - 5)}{y^2} = \frac{4(y + 3)}{y^2}$$

$$\frac{(y^2 + 3y) + (5y + 15)}{y^2} \cdot \frac{4y - 20}{4x + 8} = \frac{y(y + 3) + 5(y + 3)}{y^2} \cdot \frac{4(y - 5)}{4x + 8} = \frac{(y + 3)(y + 5)}{y^2} \cdot \frac{4(y - 5)}{4x + 8}$$

$$\frac{y(y + 3) + 5(y + 3)}{4x + 8} \cdot \frac{4y - 20}{y^2} = \frac{(y + 3)(y + 5)}{4x + 8} \cdot \frac{4(y - 5)}{y^2}$$

$$\frac{(y + 3)(y + 5)}{y^2 - 25} \cdot \frac{4y - 20}{4x + 8} = \frac{(y + 3)(y + 5)}{(y + 5)(y - 5)} \cdot \frac{4(y - 5)}{4x + 8} = \frac{4(y + 3)}{y - 5}$$

$$\frac{(y + 3)(y + 5)}{(y + 5)(y - 5)} \cdot \frac{4y - 20}{4x + 8} = \frac{y + 3}{y - 5} \cdot \frac{4y - 20}{4x + 8} = \frac{4(y + 3)}{y - 5}$$

$$\frac{y + 3}{y - 5} \cdot \frac{4(y - 5)}{4x + 8} = \frac{y + 3}{y - 5} \cdot \frac{4(y - 5)}{4(x + 2)} = \frac{4(y + 3)}{4(x + 2)} = \frac{y + 3}{x + 2}$$

$$\frac{y+3}{y-5} \times \frac{y-5}{x+2} = \frac{y+3}{x+2}$$

$$3. \quad \frac{x^3 + 64}{x^2 - 16} \div \frac{6x - 24}{x^3 - 4x^2 + 16x}$$

$$\frac{(x+4)(x^2 - x \cdot 4 + 4^2)}{x^2 - 16} = \frac{x \cdot 6x - 24}{x^3 - 4x^2 + 16x}$$

$$\frac{(x+4)(x^2 - x \cdot 4 + 4^2)}{(x+4)(x-4)} = \frac{x \cdot 6x - 24}{x^3 - 4x^2 + 16x}$$

$$\frac{x^2 - x \cdot 4 + 4^2}{x-4} \div \frac{6x-24}{x^3 - 4x^2 + 16x} =$$

$$\frac{x^2 - 4x + 4^2}{x-4} \div \frac{6x-24}{x^3 - 4x^2 + 16x} =$$

$$\frac{x^2 - 4x + 16}{x-4} \div \frac{6(x-4)}{x(x^2 - 4x + 16)} = \frac{6}{x}$$

$$4. \quad \frac{5x^2 + 13x - 6}{4 - 25} \div \frac{10x + 4}{9 - x^2} =$$

$$\frac{5x^2 + 13x - 6}{4 - 25x} \div \frac{2(5x + 2)}{9 - x^2} =$$

$$\frac{(5x-2)(x+3)}{4-25x} \cdot \frac{2(5x+2)}{9-x^2}$$

$$\frac{(5x-2)(x+3)}{4-25x} \cdot \frac{2(5x+2)}{(3+x)(3-x)}$$

$$\frac{(5x-2)}{4-25x} \cdot \frac{2(5x+2)}{(3-x)} = \frac{(5x-2)}{(4-25x)} \cdot \frac{2(5x+2)}{(3-x)}$$

$$\frac{2(5x-2)}{(4-25x)} \cdot \frac{2(5x+2)}{(3-x)} = \frac{2(5x-2)}{(4-25x)} \cdot \frac{2(5x+2)}{(3-x)}$$