 Ejercicio

Práctica simplificando expresiones racionales con suma y resta.

1.
$$\frac{x-7}{15} + \frac{x-9}{25} - \frac{x+3}{45}$$

2.
$$\frac{a-2b}{2a} - \frac{a-5b}{4a} + \frac{a+7b}{8a}$$

3.
$$\frac{2}{xy} - \frac{3y^2 - x^2}{xy^3} + \frac{xy + y^2}{x^2y^2}$$

4.
$$\frac{x-3}{5x} + \frac{x^2-9}{10x^2} - \frac{8-x^3}{15x^3}$$

5.
$$\frac{a}{x^2-4} + \frac{b}{(x-2)^2}$$

6.
$$\frac{1}{x(x-y)} + \frac{1}{y(x+y)}$$

7.
$$\frac{1}{2x-3y} - \frac{x+y}{4x^2-9y^2}$$

8.
$$\frac{1}{2x+y} + \frac{1}{2x-y} - \frac{3x}{4x^2-y^2}$$

9.
$$\frac{2a}{2a+3b} + \frac{3b}{2a-3b} - \frac{8b^2}{4a^2-9b^2}$$

10.
$$\frac{5x}{6(x^2-1)} - \frac{1}{2(x-1)} + \frac{1}{3(x+1)}$$

11.
$$\frac{2}{x^2-3x+2} + \frac{2}{x^2-x-2} - \frac{1}{x^2-1}$$

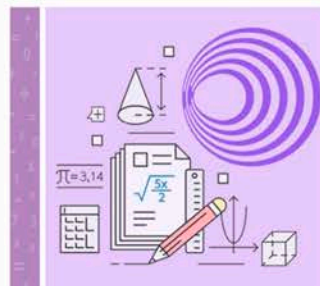
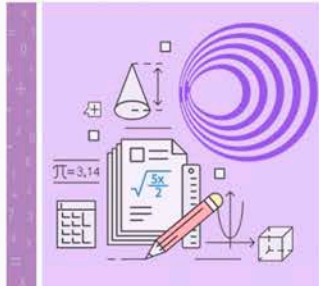
12.
$$\frac{1+2a}{1-2a} - \frac{1-2a}{1+2a} - \frac{8a}{(1-2a)^2}$$

13.
$$\frac{1}{1+x} - \frac{x}{(1+x)^3} - \frac{x^2}{(1+x)^3}$$

14.
$$\frac{x-a}{x+a} + \frac{a^2+3ax}{a^2-x^2} - \frac{x+a}{x-a}$$

15.
$$\frac{x^2+y^2}{x^2-y^2} + \frac{x}{x+y} + \frac{y}{y-x}$$

16.
$$\frac{1}{2a+5b} + \frac{3a}{25b^2-4a^2} + \frac{1}{2a-5b}$$



Ejercicio

Práctica simplificando expresiones racionales que multiplican.

1.
$$\frac{6a^2bx^3}{2ab^2x^4} \cdot \frac{-4a^3bx^2}{3a^2bx}$$

2.
$$\frac{21x^2y^3}{13ab^2} \cdot \frac{28y^2x^3}{39a^2b^3}$$

3.
$$\frac{2x^2y}{3yz} \cdot \frac{5z^2x}{7xy^2} \cdot \frac{21x^2y^3z^2}{40xy^2z}$$

4.
$$\frac{x-y}{x^2+xy} \cdot \frac{x^2}{y^2-xy}$$

5.
$$\frac{14x^2-7x}{12x^3+24x^2} \cdot \frac{2x-1}{x^2+2x}$$

6.
$$\frac{x^2-6x+9}{x^2-7x+12} \cdot \frac{x^3-4x^2+9x-36}{x^4-81}$$

7.
$$\frac{x^2-9}{x+4} \cdot (2x-6)$$

8.
$$\frac{3a(a-2b)^2}{2b^3} \cdot \frac{b(a+2b)}{6a^2} \cdot \frac{12ab}{a^2-4b^2}$$

9.
$$\frac{a^2-3a}{b^2-2b} \cdot \frac{ab^2-2ab}{a^2-9} \cdot \frac{a}{b(a+3)}$$

10.
$$\frac{2x^2+3x}{y^2-2y} \cdot \frac{xy^2-2xy}{4x^2-9} \cdot \frac{x}{2xy-3y}$$

Ejercicio

Práctica simplificando expresiones racionales que dividen.

1.
$$\frac{6a^2bx^3}{2ab^2x^4} \div \frac{-4a^3bx^2}{3a^2bx}$$

2.
$$\frac{21x^2y^3}{13ab^2} \div \frac{28y^2x^3}{39a^2b^3}$$

3.
$$\frac{2x^2y}{3yz} \div \frac{21x^2y^3z^2}{40xy^2z}$$

4.
$$\frac{x-y}{x^2+xy} \div \frac{x^2}{y^2-xy}$$

5.
$$\frac{14x^2-7x}{12x^3+24x^2} \div \frac{2x-1}{x^2+2x}$$

6.
$$\frac{x^2-6x+9}{x^2-7x+12} \div \frac{x^3-4x^2+9x-36}{x^4-81}$$

7.
$$\frac{x^2-9}{x+4} \div (2x-6)$$

8.
$$\frac{3a(a-2b)^2}{2b^3} \div \frac{12ab}{a^2-4b^2}$$

9.
$$\frac{a^2-3a}{b^2-2b} \cdot \frac{ab^2-2ab}{a^2-9} \div \frac{a}{b(a+3)}$$

10.
$$\frac{2x^2+3x}{y^2-2y} \div \frac{x}{2xy-3y}$$