

key

SILVER

Find least common denominator.

1. $4x^2, 6xy^2$

$$12x^2y^2$$

2. ab^2c, a^2bc^2

$$a^2b^2c^2$$

3. $5xy^2, 20x^3y^4$

$$20x^3y^4$$

Add. State any value(s) that make the expression undefined.

1. $\frac{5y}{4x} + \frac{5x}{6y}$

$$\frac{10x^2 + 15y^2}{12xy}, \quad x \neq 0, y \neq 0$$

2. $\frac{5y}{3x} + \frac{3x}{2y}$

$$\frac{10x^2 + 9x^2}{6xy}, \quad x \neq 0, y \neq 0$$

3. $\frac{15}{26a^2} + \frac{55}{78a^3}$

$$\frac{45a + 55}{78a^3}, \quad a \neq 0$$

4. $\frac{2b}{9a^2} + \frac{4a}{15b^3}$

$$\frac{10b^4 + 12a^3}{45a^2b^3}, \quad a \neq 0, b \neq 0$$

5. $\frac{12}{14a^3} + \frac{28}{42a^3b^3}$

$$\frac{36b^3 + 28}{42a^3b^3}, \quad a \neq 0, b \neq 0$$

6. $\frac{20}{29x^2y^2} + \frac{28}{87x^2y^3}$

$$\frac{60y + 28}{87x^2y^3}, \quad x \neq 0, y \neq 0$$

Subtract. State any value(s) that make the expression undefined.

1. $\frac{3r}{26x} - \frac{7s}{39t}$

$$\frac{9rt - 14sx}{78xt}, \quad x \neq 0, t \neq 0$$

2. $\frac{7x}{12m} - \frac{10y}{28n}$

$$\frac{49xn - 30ym}{84mn}, \quad m \neq 0, n \neq 0$$

3. $\frac{7b}{6a} - \frac{14}{24b}$

$$\frac{14b^2 - 7a}{12ab}, \quad a \neq 0, b \neq 0$$

4. $\frac{3b}{9a} - \frac{28}{36b}$

$$\frac{3b^2 - 7a}{9ab}, \quad a \neq 0, b \neq 0$$

5. $\frac{7}{16xy^3} - \frac{15}{64x^2y^2}$

$$\frac{28x - 15}{64x^2y^2}, \quad x \neq 0, y \neq 0$$

6. $\frac{y}{3xz^2} - \frac{8x}{36y^2z}$

$$\frac{3y^3 - 2x^2}{9xy^2z^2}, \quad x \neq 0, y \neq 0, z \neq 0$$

Multiply.

$$1. \frac{16}{x} \cdot \frac{2x^7}{4x^3}$$

$$8x^3, x \neq 0$$

$$2. \frac{-4ab}{21c} \cdot \frac{14c^2}{18a^2}$$

$$\frac{-4bc}{27a}, a \neq 0, c \neq 0$$

$$3. \frac{3g^4}{2h^2} \cdot \frac{2h^3}{6g}$$

$$\frac{g^3}{2}, g \neq 0, h \neq 0$$

$$4. \frac{3xyz}{4xz} \cdot \frac{6x^2}{3y^2}$$

$$\frac{3x^2}{2y}, x \neq 0, y \neq 0, z \neq 0$$

$$5. \frac{3xy^3}{10x^5y} \cdot \frac{20x^9y}{9xy^2}$$

$$\frac{2x^4y}{3}, x \neq 0, y \neq 0$$

$$6. \frac{2x^3y^6}{5x^2y^3} \cdot \frac{15x^2y^2}{10x^4y}$$

$$\frac{3y^4}{5x}, x \neq 0, y \neq 0$$

Divide.

$$1. \frac{3x^2}{4y^3} \div \frac{3x^3}{16y^5}$$

$$\frac{4y^2}{x}, x \neq 0, y \neq 0$$

$$2. \frac{3}{5d} \div \frac{-9}{df}$$

$$\frac{-f}{15}, d \neq 0, f \neq 0$$

$$3. \frac{2x^3y}{z^5} \div \left(\frac{4xy}{z^3}\right)^2$$

$$\frac{xz}{8y}, x \neq 0, y \neq 0, z \neq 0$$

$$4. \frac{p^3}{2q} \div \frac{-p}{4q}$$

$$-2p^2, p \neq 0, q \neq 0$$

$$5. \frac{27b^5}{2a^7b^3} \div \frac{9b^9}{40a^{10}}$$

$$\frac{60a^3}{b^7}, a \neq 0, b \neq 0$$

$$6. \frac{9e^6f}{27e^2f^3} \div \frac{e}{6f^2}$$

$$\frac{2e^3}{f^2}, e \neq 0, f \neq 0$$