

Fractions & Exponents - Practice

Find each sum.

1) $\frac{3}{5} + -\frac{2}{7}$

2) $-\frac{7}{4} + -\frac{1}{5}$

3) $-\frac{7}{4} + \frac{3}{5}$

4) $-\frac{1}{7} + \frac{4}{3}$

Simplify. Your answer should contain only positive exponents.

5) $3x^{-3}y^{-1}z^{-1} \cdot 3y^2z^4$

6) $4x^2y^4z^{-2} \cdot 4x^2y^3z^4$

7) $2a^4b^2c^3 \cdot 4ab^2c^3$

8) $a^{-4}b^2c^{-4} \cdot 2a^{-4}b^3c^4$

9) $x^{\frac{4}{3}}y^{\frac{1}{3}} \cdot 3yx^{\frac{1}{4}}$

10) $4y^{\frac{7}{4}}z^{\frac{5}{3}} \cdot x^{\frac{5}{4}}y^{\frac{1}{3}}z^{\frac{1}{2}}$

$$11) q^2 r^{\frac{2}{3}} \cdot 4p^{\frac{2}{3}} q^{-2} r^{-\frac{3}{2}}$$

$$12) 4a^{\frac{5}{4}} b^2 c^{-1} \cdot a^{-\frac{1}{2}} b^2 c^{-\frac{1}{3}} \cdot 4a^{\frac{2}{3}} b^{\frac{1}{2}} c^{\frac{3}{2}}$$

Find each difference.

$$13) -\frac{4}{3} - \frac{1}{7}$$

$$14) \frac{5}{3} - \frac{6}{5}$$

$$15) \frac{4}{3} - \frac{6}{5}$$

$$16) -\frac{1}{2} - \frac{5}{7}$$

Simplify. Your answer should contain only positive exponents.

$$17) \frac{3yx^3z^4}{4x^{-1}z^{-3}}$$

$$18) \frac{4pm^3}{2m^2p^{-2}q^4}$$

$$19) \frac{3b^2c^2}{2a^4b^4c^4}$$

$$20) \frac{x^3y^3z^2}{2x^3y^3z^4}$$

$$21) \frac{j^{\frac{5}{4}} k^{-\frac{3}{2}}}{3h j^{-\frac{5}{3}} k^{-1}}$$

$$22) \frac{2pq^{\frac{1}{2}} r^{\frac{5}{3}}}{3p^{-\frac{3}{2}} q^{-2} r^{\frac{1}{2}}}$$

$$23) \frac{4x^2 y^{-\frac{5}{3}}}{yx^{-\frac{5}{3}} z^2}$$

$$24) \frac{2p^{\frac{1}{3}} q^{-\frac{5}{3}}}{m^{\frac{5}{4}} p^{\frac{5}{3}} q^{\frac{1}{2}}}$$

Find each product.

$$25) \frac{7}{5} \times \frac{7}{4}$$

$$26) \frac{9}{5} \times -\frac{11}{6}$$

$$27) \frac{12}{7} \times -\frac{8}{5}$$

$$28) 2 \times -\frac{8}{7}$$

Simplify. Your answer should contain only positive exponents.

$$29) (2x^2y^{-1}z^4)^4$$

$$30) (2h^{-4}j^3k^{-4})^2$$

$$31) (4x^{-4}y^3z^{-2})^4$$

$$32) (2xy^4z^{-4})^{-1}$$

$$33) \left(h^{\frac{2}{3}}j^{\frac{7}{4}}k^{\frac{1}{4}}\right)^{-2}$$

$$34) \left(x^{-2}y^{\frac{3}{4}}z^{\frac{1}{3}}\right)^{\frac{1}{3}}$$

$$35) \left(m^{-1}p^{-\frac{4}{3}}q^4\right)^{\frac{2}{3}}$$

$$36) \left(m^2p^{-\frac{1}{4}}q^{-\frac{4}{3}}\right)^2$$