

The purpose of this exercise is to review one of the most important skills in math: operations with fractions

Reduce all of your answers to lowest terms. Do not write mixed fractions.

Write any rules or strategies that you use beside each solution.

1. Add or subtract the following fractions.

$$a) \frac{1}{2} - \frac{3}{10}$$

$$= \frac{5}{10} - \frac{3}{10}$$

$$= \frac{2}{10}$$

$$= \frac{1}{5}$$

Lowest
Common
Denominator

$$b) \frac{3}{4} + \frac{7}{20}$$

$$= \frac{15}{20} + \frac{7}{20}$$

$$= \frac{22}{20}$$

$$= \frac{11}{10}$$

LCD

2. Evaluate each of the following expressions.

$$a) 5 - \frac{1}{3}$$

$$= \frac{15}{3} - \frac{1}{3}$$

$$= \frac{14}{3}$$

LCD

$$b) \frac{2}{5} - \frac{1}{6} + \frac{1}{3}$$

$$= \frac{12}{30} - \frac{5}{30} + \frac{10}{30}$$

$$= \frac{7}{30}$$

LCD

3. Multiply or divide the following fractions.

$$a) \frac{1}{2} \times \frac{4}{5} = \frac{4}{10} = \frac{2}{5}$$

(or, you could cancel...

$$\frac{1}{\cancel{2}} \times \frac{\cancel{4}^2}{5} = \frac{2}{5})$$

$$b) \frac{6}{7} \div \frac{3}{4}$$

$$= \frac{6}{7} \times \frac{4}{3}$$

$$= \frac{24}{21}$$

$$= \frac{8}{7}$$

Invert &
multiply

4. Evaluate each of the following expressions.

a) $\frac{8}{30} \div 2$

$$\begin{aligned} &= \frac{8}{30} \div \frac{2}{1} \\ &= \frac{8}{30} \times \frac{1}{2} \\ &= \frac{8}{60} \\ &= \frac{2}{15} \end{aligned}$$

b) $\frac{3}{5} \div 4$

$$\begin{aligned} &= \frac{3}{5} \div \frac{4}{1} \\ &= \frac{3}{5} \times \frac{1}{4} \\ &= \frac{3}{20} \end{aligned}$$

5. Evaluate each of the following expressions.

a) $\frac{8}{15} \div \frac{2}{3}$

$$\begin{aligned} &= \frac{8}{15} \times \frac{3}{2} \\ &= \frac{24}{30} \\ &= \frac{4}{5} \end{aligned}$$

b) $\frac{3}{5}$ of 7

$$\begin{aligned} &= \frac{3}{5} \times \frac{7}{1} \\ &= \frac{21}{5} \end{aligned}$$

6. Evaluate each of the following expressions.

a) $50\left(\frac{1}{2}\right)^3$

$$\begin{aligned} &= 50\left(\frac{1^3}{2^3}\right) \\ &= 50\left(\frac{1}{8}\right) \\ &= \frac{50}{8} \\ &= \frac{25}{4} \end{aligned}$$

b) $2\left(6 - \frac{5}{2}\right)^2 + 3$

$$\begin{aligned} &= 2\left(\frac{12}{2} - \frac{5}{2}\right)^2 + 3 \\ &= 2\left(\frac{7}{2}\right)^2 + 3 \\ &= 2\left(\frac{49}{4}\right) + 3 \\ &= \frac{49}{2} + \frac{6}{2} \\ &= \frac{55}{2} \end{aligned}$$