

Math 8 Journal Entries

Learning Guide 10 (Multiplying and Dividing Fractions)

Although many of the below activities involve modelling fractions, it is as important to know how to solve problems mathematically as well (eg. To multiply fractions: multiply the numerators then multiply the denominators and express in lowest terms).

Expectation 1: Multiply a fraction and a whole number.

Use diagrams to model and solve the question below and explain. (P.201)

$$3 \times \frac{3}{4}$$

Expectation 2: Divide a fraction by a whole number.

Use diagrams to model and solve the question below and explain (P.207)

$$\frac{3}{4} \div 3$$

Expectation 3: Multiply two proper fractions.

Use diagrams to model and solve the question below and explain (P.213)

$$\frac{2}{3} \times \frac{1}{2}$$

Expectation 4: Multiply two improper fractions or mixed numbers.

Show how to change the improper fraction below into a mixed fraction and describe the steps.
(P.219-220)

$$\frac{17}{6}$$

Show how to change the mixed fraction below into an improper fraction and describe the steps.
(P.219-220)

$$1\frac{3}{4}$$

Multiply, solve and simplify the question below. Explain each step. (P.219-220)

$$2\frac{1}{2} \times 1\frac{2}{5}$$

Expectation 5: Divide two fractions or mixed numbers.

Show how to divide the fractions below and describe the steps. (Key ideas p.226-227).

$$\frac{3}{4} \div \frac{1}{4}$$

Expectation 6: Decide when to multiply fractions and when to divide fractions in solving problems.

For each of the following word problems, write the equation and explain why you would either divide or multiply.

Mr. Johnston needs a shelf to hold a set of textbooks. Each book is $3\frac{3}{4}$ cm wide. How many books will fit on an 86 cm wide shelf?

Equation:

Explain:

Cat food comes in 2 kg bags. Nibbles the cat eats $\frac{3}{4}$ of a bag every week. What amount does she eat every week?

Equation:

Explain: