

B: Dividing a Fraction by a Whole Number Continued

Examples:

1. Two ~~recipes~~ types of soup both include carrot.

a) The 1st soup requires $\frac{1}{4}$ carrot to make four servings.
What fraction of a carrot is in each serving?

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

$$= \frac{1}{16}$$

b) The 2nd soup requires $\frac{1}{4}$ carrot to make two servings.
What fraction of a carrot is in each serving?

$$\begin{aligned}\frac{1}{4} &\div 2 \\ &= \frac{1}{4} \div \frac{2}{1} \\ &= \frac{1}{4} \times \frac{1}{2}\end{aligned}$$

$$= \frac{1}{8}$$

2. B.C., Ontario's and Quebec's populations are approximately equal. The sum of their populations is about $\frac{2}{3}$ of the population of Canada. What is the population of each of the provinces listed as a fraction of Canada's population?

$$\frac{2}{3} \div 3 = \frac{2}{3} \div \frac{3}{1} = \frac{2}{3} \times \frac{1}{3} = \frac{2}{9}$$

3. Melissa uses $\frac{1}{2}$ of a tank of gasoline in a few days ~~week~~
trip. What fraction does she use each day?

$$\frac{1}{2} \div 4$$

$$= \frac{1}{2} \times \frac{1}{4}$$

$$= \frac{1}{8}$$

4. It takes $\frac{3}{5}$ of a can of paint to paint four walls. What fraction of a can does it take to paint two walls.

$$4 \text{ walls} \div 2 = 2 \text{ walls.}$$

$$\frac{3}{5} \div 2$$

$$= \frac{3}{5} \div \frac{2}{1}$$

$$= \frac{3}{5} \times \frac{1}{2}$$

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

Assignment Pg. 208 # 6-12