In this sub-unit . . .

- We converted between metric units and between customary units. We saw that we can *use powers of 10* to convert between metric units, but not between customary units.

Convert from larger to smaller unit	Convert from smaller to larger unit
90 km = 90,000,000 mm 1 km = 1,000 m 90 × 1,000 = 90,000 1 m = 1,000 mm 90,000 × 1,000 = 90,000,000,000	26,400 ft = 8,800 yd 3 ft = 1 yd 26,400 ÷ 3 = 8,800 or $26{,}400 \times \frac{1}{3} = \frac{26{,}400}{3}$ = 8,800

Math tip: When converting from a smaller unit to a larger unit, you can divide by a number greater than 1 or multiply by a number less than 1.

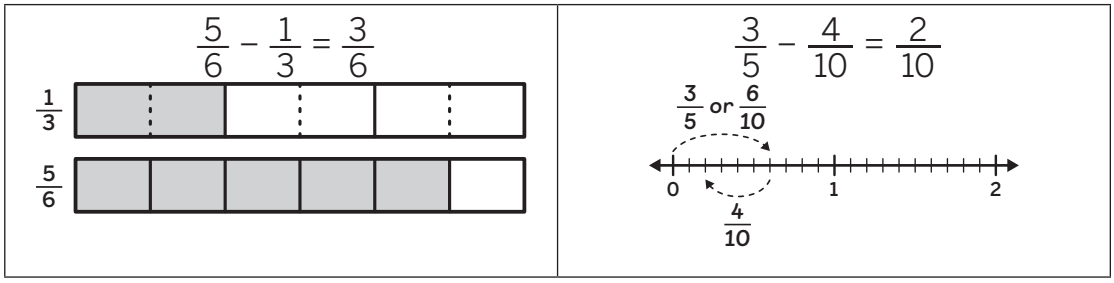
- We solved multi-step problems involving unit conversions.

5 volunteers each mixed 4.5 liters of nectar with 3,800 milliliters of water. How many total liters of nectar mixture did they make?

Strategy A	Strategy B
3,800 ÷ 1,000 = 3.8, so 3.8 liters	5 × 4.5 = 22.5, so 22.5 liters 5 × 3,800 = 19,000, so 19,000 milliliters
4.5 + 3.8 = 8.3, so 8.3 liters	19,000 ÷ 1,000 = 19, so 19 liters
8.3 × 5 = 41.5, so 41.5 liters	22.5 + 19 = 41.5, so 41.5 liters

In this sub-unit . . .

- We used objects and models to add and subtract fractions with unequal denominators.



- We created common denominators to add and subtract fractions with unequal denominators.

Rename 1 fraction

$$4\frac{3}{4} - 3\frac{11}{12} = \frac{10}{12}$$

$$\frac{3 \times 3}{4 \times 3} = \frac{9}{12}$$

$$4\frac{9}{12} = 3\frac{21}{12}$$

$$3\frac{21}{12} - 3\frac{11}{12} = \frac{10}{12}$$

Rename both fractions

$$\frac{3}{5} + \frac{5}{8} = \frac{49}{40}$$

$$\frac{3 \times 8}{5 \times 8} = \frac{24}{40}$$

$$\frac{5 \times 5}{8 \times 5} = \frac{25}{40}$$

$$\frac{24}{40} + \frac{25}{40} = \frac{49}{40}$$

$$\frac{3}{4} - \frac{7}{10} = \frac{1}{20}$$

$$\frac{3 \times 5}{4 \times 5} = \frac{15}{20}$$

$$\frac{7 \times 2}{10 \times 2} = \frac{14}{20}$$

$$\frac{15}{20} - \frac{14}{20} = \frac{1}{20}$$

$$\frac{14}{8} + \frac{9}{12} = \frac{10}{4}$$

$$\frac{14 \div 2}{8 \div 2} = \frac{7}{4}$$

$$\frac{9 \div 3}{12 \div 3} = \frac{3}{4}$$

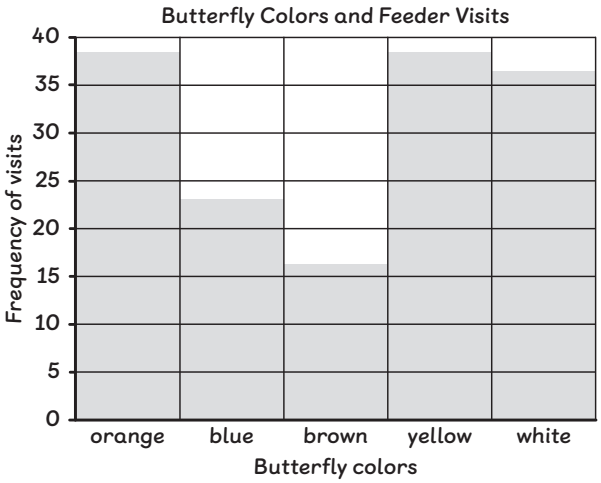
$$\frac{7}{4} + \frac{3}{4} = \frac{10}{4}$$

Math tip: When 1 denominator is a multiple of the other, you can rename the other fraction using that denominator.

In this sub-unit . . .

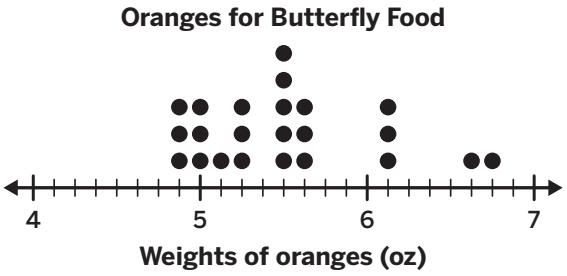
- We represented data using frequency tables, bar graphs, dot plots, and stem-and-leaf plots.

Butterfly color	Frequency of visits
orange	39
blue	23
brown	16
yellow	39
white	36



- We represented and solved one- and two-step problems using data involving fractions from frequency tables, bar graphs, dot plots, or stem-and-leaf plots.

The dot plot shows the weights of oranges used for butterfly food. What is the difference between the heaviest and lightest orange in ounces?



$6\frac{6}{8} - 4\frac{7}{8} = 2\frac{6}{8} - \frac{7}{8} = 1\frac{14}{8} - \frac{7}{8} = 1\frac{7}{8}$

$1\frac{7}{8}$ ounces