3-4: Learning Goals

- Let's convert measurements to different units.

3-4-1: Fractions of a Number

Find the values mentally.

$\frac{1}{4}$ of 32

$\frac{3}{4}$ of 32

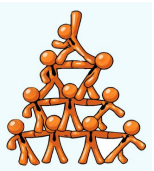$\frac{3}{8}$ of 32

$\frac{3}{8}$ of 64

3-4-2: Road Trip

Elena and her mom are on a road trip outside the United States. Elena sees this road sign.

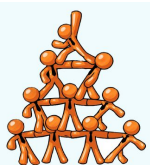Elena's mom is driving 75 miles per hour when she gets pulled over for speeding.

MAXIMUM

80

1. The police officer explains that 8 kilometers is approximately 5 miles.

   a. How many kilometers are in 1 mile?

   b. How many miles are in 1 kilometer?

2. If the speed limit is 80 kilometers per hour, and Elena's mom was driving 75 miles per hour, was she speeding? By how much?

3-4-3: Veterinary Weights

A veterinarian uses weights in kilograms to figure out what dosages of medicines to prescribe for animals. For every 10 kilograms, there are 22 pounds.

1. Calculate each animal's weight in kilograms. Explain or show your reasoning. If you get stuck, consider drawing a double number line or table.

   a. Fido the Labrador weighs 88 pounds.

   b. Spot the Beagle weighs 33 pounds.

   c. Bella the Chihuahua weighs $5\frac{1}{2}$ pounds.

2. A certain medication says it can only be given to animals over 25 kilograms. How much is this in pounds?

3-4-4: Cooking with a Tablespoon

Diego is trying to follow a recipe, but he cannot find any measuring cups! He only has a tablespoon. In the cookbook, it says that 1 cup equals 16 tablespoons.

1. How could Diego use the tablespoon to measure out these ingredients?
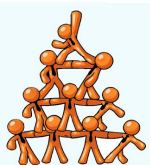
   a. $\frac{1}{2}$ cup almonds

   b. $1\frac{1}{4}$ cup of oatmeal

   c. $2\frac{3}{4}$ cup of flour

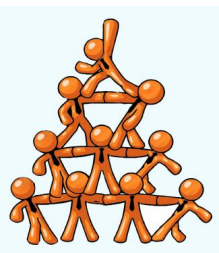2. Diego also adds the following ingredients. How many cups of each did he use?

   a. 28 tablespoons of sugar

   b. 6 tablespoons of cocoa powder

3-4: Lesson Synthesis

weight (pounds)	weight (kilograms)
22	10
1	$\frac{10}{22}$
88	40
33	15
$5\frac{1}{2}$	$2\frac{1}{2}$
$\frac{22}{10}$	1
55	25

3-4: Learning Targets

- I know that when we measure things in two different units, the pairs of measurements are equivalent ratios.

- I can convert measurements from one unit to another, using double number lines, tables, or by thinking about "how much for 1."

3-4-5: Buckets

A large bucket holds 5 gallons of water, which is about the same as 19 liters of water.

A small bucket holds 2 gallons of water. About how many liters does it hold?