

Level B Unit 2

Measurement of Volume



Note: Measurement of Volume includes questions concerning length and weight from **Level A**, beginning with Level A, Unit 1, Lesson 3. (You may need to review Level A, Units 1, 7, and 9 before you start this unit.)

Lesson 1

- a. You're going to learn about units of volume. Those are units that refer to the amount a container can hold.
- b. Here are the first facts about volume: A cup is smaller than a pint. There are 2 cups in a pint.
 - Which is larger, a cup or a pint? (Signal.) *A pint.*
 - How many cups are in a pint? (Signal.) *2.*
 - New fact: There are two pints in a quart.
 - Which is larger, a pint or a quart? (Signal.) *A quart.*
 - How many pints are in a quart? (Signal.) *2.*
 - That means there are 4 cups in a quart. How many cups are in a quart? (Signal.) *4.*
 - How many pints are in a quart? (Signal.) *2.*
 - Remember those facts.
(Repeat step b until firm.)
- c. Number your paper from 1 to 5. Get ready to write answers to these items. ✓
 - 1. Which is larger, a cup or a pint?
 - 2. Which is larger, a pint or a quart?
 - 3. How many cups are in one pint?
 - 4. How many pints are in one quart?
 - 5. How many cups are in one quart?
- d. Check your work.
 - Item 1. Which is larger, a cup or a pint? (Signal.) *A pint.*
 - Item 2. Which is larger, a pint or a quart? (Signal.) *A quart.*
 - Item 3. How many cups are in one pint? (Signal.) *2.*
 - Item 4. How many pints are in one quart? (Signal.) *2.*
 - Item 5. How many cups are in one quart? (Signal.) *4.*

Lesson 2

- a. Let's review facts about volume.
- Which is larger, a cup or a pint? (Signal.) *Pint.*
 - How many cups are in a pint? (Signal.) *2.*
 - Which is larger, a pint or a quart? (Signal.) *Quart.*
 - How many pints are in a quart? (Signal.) *2.*
 - How many cups are in a quart? (Signal.) *4.*
 - Say the fact about the number of cups in a quart. (Signal.) *There are 4 cups in a quart.*
 - Say the fact about the number of pints in a quart. (Signal.) *There are 2 pints in a quart.*
- b. Here's a new fact: There are 4 quarts in a gallon. Everybody, say that fact. (Signal.) *There are 4 quarts in a gallon.*
- c. Let's review all our facts.
- How many pints in a quart? (Signal.) *2.*
 - How many quarts in a gallon? (Signal.) *4.*
 - Which is larger, a gallon or a pint? (Signal.) *Gallon.*
 - Which is larger, a pint or a quart? (Signal.) *Quart.*
 - How many quarts in a gallon? (Signal.) *4.*
 - Which is larger, a cup or a pint? (Signal.) *Pint.*
- (Repeat step c until firm.)
- d. Number your paper from 1 to 9. Get ready to write answers to these items. ✓
- 1. Which is larger, a quart or a gallon?
 - 2. Which is larger, a cup or a pint?
 - 3. How many cups are in a pint?
 - 4. How many pints are in a quart?
 - 5. How many quarts are in a gallon?
 - 6. Write the number problem to figure out the number of quarts in 15 gallons.
 - 7. Write the number problem to figure out the number of cups in 88 pints.
 - 8. Write the number problem to figure out the number of pints in 33 quarts.
 - 9. Write the number problem to figure out the number of cups in 40 pints.
- e. Check your work.
- Item 1. Which is larger, a quart or a gallon? (Signal.) *A gallon.*
 - Item 2. Which is larger, a cup or a pint? (Signal.) *A pint.*

- Item 3. How many cups are in a pint? (Signal.) 2.
- Item 4. How many pints are in a quart? (Signal.) 2.
- Item 5. How many quarts are in a gallon? (Signal.) 4.
- Item 6. What's the number problem to figure out the number of quarts in 15 gallons? 15×4 [or 4×15].
- Item 7. What's the number problem to figure out the number of cups in 88 pints? (Signal.) 88×2 [or 2×88].
- Item 8. What's the number problem to figure out the number of pints in 33 quarts? (Signal.) 33×2 [or 2×33].
- Item 9. What's the number problem to figure out the number of cups in 40 pints? (Signal.) 40×2 [or 2×40].

Lesson 3

- a. Let's review the facts about volume.
- How many cups are in a pint? (Signal.) 2.
 - How many cups are in a quart? (Signal.) 4.
 - How many pints are in a quart? (Signal.) 2.
 - How many quarts are in a gallon? (Signal.) 4.
- (Repeat step a until firm.)
- b. Here are new facts about volume: The metric unit that is almost the same size as a quart is a liter. A liter is just a tiny bit larger than a quart.
- What's the metric unit that is almost the same size as a quart? (Signal.)
A liter.
 - So about how many cups are in one liter? (Signal.) 4.
 - About how many pints are in one liter? (Signal.) 2.
 - About how many liters are in one gallon? (Signal.) 4.
- c. Number your paper from 1 to 7. Get ready to write answers to these items. ✓
- 1. How many quarts are in a gallon?
 - 2. How many pints are in a quart?
 - 3. How many cups are in a pint?
 - 4. What's the name of the metric unit that is almost the same size as a quart?
 - 5. Which is slightly larger, a quart or a liter?
 - 6. Write the number problem to figure out the number of quarts in 56 gallons.
 - 7. Write the number problem to figure out the number of cups in 23 quarts.
- d. Check your work.
- Item 1. How many quarts are in a gallon? (Signal.) 4.
 - Item 2. How many pints are in a quart? (Signal.) 2.
 - Item 3. How many cups are in a pint? (Signal.) 2.
 - Item 4. What's the name of the metric unit that is almost the same size as a quart? (Signal.) *Liter.*
 - Item 5. Which is slightly larger, a quart or a liter? (Signal.) *Liter.*
 - Item 6. What's the number problem to figure out the number of quarts in 56 gallons? (Signal.) $56 \div 4$ [or 4×56].
 - Item 7. What's the number problem to figure out the number of cups in 23 quarts? (Signal.) 23×4 [or 4×23].

Lesson 4

REGULAR LESSON/MASTERY TEST • FRIDAY REVIEW

- a. Let's see how much you remember.
- How many pints are in a quart? (Signal.) *2.*
 - How many quarts are in a gallon? (Signal.) *4.*
 - How many cups are in a pint? (Signal.) *2.*
 - Is a liter about the same size as a quart or as a gallon? (Signal.) *Quart.*
 - Which is slightly larger, a quart or a liter? (Signal.) *A liter.*
- (Repeat step a until firm.)
- b. Here's a fact: There are 1,000 milliliters in a liter.
- Once more: There are 1,000 milliliters in a liter. Say that fact. (Signal.) *There are 1,000 milliliters in a liter.*
 - A milliliter is a cube that is one centimeter on each edge. A milliliter is one centimeter wide, one centimeter high, and one centimeter deep. That's a cubic centimeter.
 - Remember, a milliliter is a cubic centimeter. What's another name for a milliliter? (Signal.) *A cubic centimeter.*
 - How many milliliters are in a liter? (Signal.) *1,000.*
- (Repeat step b until firm.)
- c. Number your paper from 1 to 5. Get ready to write answers to these items. ✓
- 1. How many pints are in a quart?
 - 2. How many cups are in a pint?
 - 3. How many quarts are in a gallon?
 - 4. What unit of volume is about the same size as a quart?
 - 5. There are 1,000 smaller units in a liter. Write two names for the smaller unit.
- d. Check your work.
- Item 1. How many pints are in a quart? (Signal.) *2.*
 - Item 2. How many cups are in a pint? (Signal.) *2.*
 - Item 3. How many quarts are in a gallon? (Signal.) *4.*
 - Item 4. What unit of volume is about the same size as a quart? (Signal.) *A liter.*
 - Item 5. There are 1,000 smaller units in a liter. What are two names for the smaller unit? (Signal.) *Milliliter and cubic centimeter.*

Lesson 5

REGULAR LESSON/MASTERY TEST • FRIDAY REVIEW

- a. You've learned the name of a metric unit of volume that is nearly the same size as a quart. What's that unit? (Signal.) *A liter.*
- A liter is made up of a lot of smaller units. What's the name of the smaller units? (Signal.) *Milliliter.*
 - How many milliliters are in a liter? (Signal.) *1,000.*
 - A milliliter is a cubic something. What is it? (Signal.) *A cubic centimeter.*
- (Repeat step a until firm.)
- b. Number your paper from 1-7. Get ready to write answers to these items. ✓
- 1. How many cups are in a pint?
 - 2. How many pints are in a quart?
 - 3. How many quarts are in a gallon?
 - 4. What's the name of the metric unit that is almost the same size as a quart?
 - 5. Which of those two units is slightly larger?
 - 6. How many milliliters are in a liter?
 - 7. A milliliter is also a cubic something. What is it?
- c. Check your work.
- Item 1. How many cups are in a pint? (Signal.) *2.*
 - Item 2. How many pints are in a quart? (Signal.) *2.*
 - Item 3. How many quarts are in a gallon? (Signal.) *4.*
 - Item 4. What's the name of the metric unit that is almost the same size as a quart? (Signal.) *Liter.*
 - Item 5. Which of those two units is slightly larger? (Signal.) *A liter.*
 - Item 6. How many milliliters are in a liter? (Signal.) *1,000.*
 - Item 7. A milliliter is also a cubic something. What is it? (Signal.) *Cubic centimeter.*



National Institute for Direct Instruction (NIFDI)

P.O. Box 11248
Eugene, Oregon 97440
Voice 1-877-485-1973
Fax (541) 683-7543
E-Mail: info@nifdi.org