



TABE Math-E

PAXEN

Unit-5 Measurement and Data

Lesson 39

Measure Liquid Volume
(Metric)

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Math-E - Lesson 39 – Liquid Volume

Lesson 39

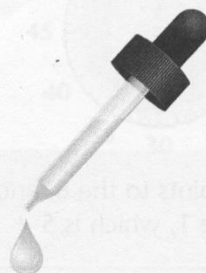
Measure Volume

3.MD.2 – Medium

Liquid volume is the amount of three-dimensional space a liquid takes up. You can measure liquid volume using liters (L) and milliliters (mL). A liter is 1,000 milliliters.



A liter (L) is a metric unit of liquid measurement. A bottle of water sold to drink often contains 1L of water.



A milliliter (mL) is a much smaller metric unit of liquid measurement. Milliliters are used to measure small amounts of liquid, like a drop of water.

Example How much liquid is in the measuring cup?

1) Determine the units. The top line is marked mL, so the measuring cup measures in milliliters.

2) Read the measuring line that corresponds to the liquid level. The measuring line reads 225.

So, there is 225 mL of liquid in the cup.



Example Lorraine orders 5 liters of coffee for an office party and 2 liters of juice. Then she finds out more people are attending and doubles the order. How many liters of coffee did Lorraine order? How many liters of juice did she order?

1) Multiply the number of liters of coffee by 2. $5 \times 2 = 10$.

2) Multiply the number of liters of juice by 2. $2 \times 2 = 4$.

So, Lorraine bought 10 liters of coffee and 4 liters of juice.

Test Example

1. Josephine buys a cup of coffee. Which is the best estimate for how much coffee is in her cup?
- A. 35 milliliters B. 350 milliliters
C. 35 liters D. 350 liters

1. B A liter is about the size of a bottle of water, which is too much for a coffee cup. 35 milliliters is not enough to fill a coffee cup.

Hint

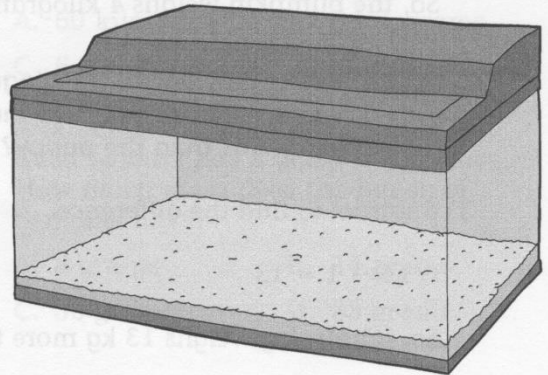
When estimating capacity with liters and milliliters, consider whether the container or the amount of liquid is relatively large or small.

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Practice

Read each question. Select the correct answer.

- 1 Corey fills a bucket to mop the floor. Which is the best estimate for how much water is in the bucket?
A. 5 mL B. 50 mL
C. 5 L D. 50 L
 - 2 Franco has 525 mL of broth for a recipe. He needs 950 mL. How many milliliters of broth does Franco still need?
A. 400 mL B. 425 mL
C. 950 mL D. 1475 mL
 - 3 Which of the following is most likely to be measured in liters?
A. A dose of medicine
B. A bowl of cereal
C. A door
D. A container of juice
 - 4 Julia buys a tube of toothpaste at the store. Which is the most reasonable estimate of how much toothpaste is in the tube?
A. 250 L B. 25 L
C. 250 mL D. 25 mL
 - 5 Sharon goes to the gas station to fill her car when it is nearly out of gas. Which is the most reasonable estimate of how much gas it takes to fill her car's tank?
A. 40 L B. 4 L
C. 40 mL D. 4 mL
 - 6 How much liquid is in the measuring cup?
- 7 Tomás has 42 mL of vanilla. He shares it equally between 6 bowls in the kitchen. How many milliliters of vanilla go in each bowl?
A. 252 mL B. 36 mL
C. 7 mL D. 6 mL
 - 8 Jesse has 455 mL of water in a beaker. He pours out 225 mL. How many milliliters of water are in the beaker now?
A. 130 mL B. 230 mL
C. 280 mL D. 680 mL
 - 9 Gloria buys a fish tank. Which is the best estimate of how many liters of water she will need to fill her fish tank?



- 10 Neal is going camping with three friends. Each person needs to bring 6 liters of water. How many liters of water do they need in all?
A. 12 L
B. 18 L
C. 24 L
D. 30 L

- A. 150 L B. 200 L
C. 150 mL D. 200 mL

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Lesson 39

Measure Volume

(3.MD.2)

- 1. C.** 5 or 50 milliliters would not fill a bucket, and 50 liters would not fit in a bucket.
- 2. B.** $950 - 525 = 425$. Franco still needs 425 milliliters of broth.
- 3. D.** Cereal and a door are not liquids. A dose of medicine is much less than a liter.
- 4. C.** A regular size tube of toothpaste contains approximately 250 milliliters.
- 5. A.** 40 liters is approximately the amount of gasoline needed to fill a car with a small gas tank.
- 6. C.** The level of the liquid is at the 150 mark, and the measuring units for the cup are mL.
- 7. C.** $42 \div 6 = 7$. 7 milliliters of vanilla go in each bowl.
- 8. B.** $455 - 225 = 230$. 230 milliliters of water are in the beaker now.
- 9. B.** The fish tank can hold approximately 75 bottles of water. 750 liters would overflow the tank, while 750 mL or 75 mL are both less than a bottle of water and would not fill the tank.
- 10. C.** There are 4 people camping. $4 \times 6 = 24$.

Math-E - Practice 39 – Liquid Volume

Practice 39

Measure Volume

3.MD.2 – Medium

Conversion factor: 1 liter = 1,000 milliliters

- 1 Hideaki takes a spoonful of liquid medicine. What is the best estimate for how much medicine is in the spoon?
- A. 10 mL B. 820 mL 3.MD.2
C. 5 L D. 740 L

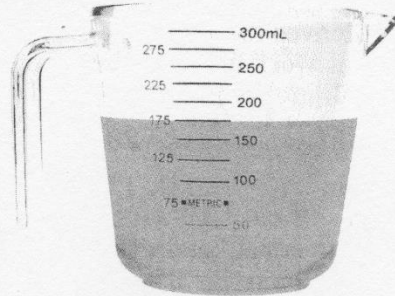
- 2 Tina has a thermos filled with 600 milliliters of coffee. She drinks 220 milliliters. How much coffee is left in the thermos? 3.MD.2
- A. 260 mL
B. 280 mL
C. 380 mL
D. 820 mL

- 3 Which two items are most likely to be measured in liters? 3.MD.2
- A. a hot tub filled with water
B. a bottle of perfume
C. a glass of water
D. a travel-size bottle of shampoo
E. a bowl of soup
F. a tank of gas in a boat

- 4 Lemarcus pours new oil into his car after removing the old oil. What is the best estimate for how much oil Lemarcus pours into his car? 3.MD.2
- A. 5 mL
B. 100 mL
C. 4 L
D. 250 L

- 5 Ada has an in-ground pool in her backyard. What is the best estimate for how much water is in the pool? 3.MD.2
- A. 3 L
B. 10 L
C. 200 L
D. 50,000 L

- 6 How much liquid is in the measuring cup? 3.MD.2



- A. 150 mL B. 175 mL
C. 200 mL D. 225 mL

- 7 Bahir pours all 900 milliliters of water from a pitcher evenly into four glasses. How much water does each glass have? 3.MD.2
- A. 4 mL
B. 100 mL
C. 225 mL
D. 450 mL

- 8 Celia has 220 liters of heating oil in a tank. She adds 430 liters of heating oil. How much heating oil is in the tank now? 3.MD.2
- A. 210 mL
B. 250 L
C. 450 L
D. 650 L

- 9 What is the best estimate of how much water fits in a bathtub? 3.MD.2
- A. 400 mL B. 2 L
C. 10 L D. 300 L

- 10 Irvin is a soccer coach. He adds two liters of water to a cooler for each of his 11 players. How much water is in the cooler? 3.MD.2
- A. 2 L B. 22 L
C. 30 L D. 200 L

Math-E - Practice 39 – Liquid Volume

11 Chizu soaks her dentures in a denture cleaning liquid. What is the best estimate of how much liquid Chizu uses? 3.MD.2

- A. 2 mL
- B. 120 mL
- C. 2 L
- D. 50 L

12 Preston buys a 700-milliliter bottle of shampoo. He uses 120 milliliters. How much shampoo is left in the bottle? 3.MD.2

- A. 580 mL
- B. 680 mL
- C. 820 mL
- D. 880 mL

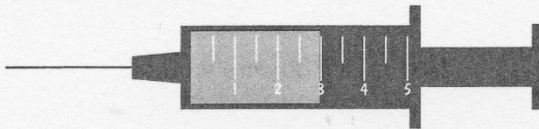
13 Which item is most likely to be measured in milliliters? 3.MD.2

- A. a bottle of sunscreen
- B. an aquarium
- C. a barrel of oil
- D. a hot water heater

14 Ilanah uses an eye dropper to transfer drops of liquid to a plate under a microscope. What is the best estimate for how much liquid Ilanah drops on the plate? 3.MD.2

- A. 4 mL
- B. 50 mL
- C. 600 mL
- D. 3 L

15 This syringe measures liquid in milliliters. The liquid is light blue. How much liquid does the syringe have in it? 3.MD.2



- A. 1 mL
- B. 2.50 mL
- C. 3 mL
- D. 3.50 mL

16 Santino fills his kitchen sink with water to wash dishes. What is the best estimate for how much water fits in the sink? 3.MD.2

- A. 6 mL
- B. 400 mL
- C. 1 L
- D. 16 L

17 Reyna has 480 milliliters of batter for muffins. She separates the batter evenly into 12 paper liners. How much batter is in each liner? 3.MD.2

- A. 4 mL
- B. 20 mL
- C. 40 mL
- D. 120 mL

18 Melvin has 110 milliliters of water in a vase. He adds 140 milliliters of water. How much water is in the vase now? 3.MD.2

- A. 30 mL
- B. 150 mL
- C. 200 mL
- D. 250 mL

19 What is the best estimate of how much liquid fits in a travel-size bottle of skin moisturizer? 3.MD.2

- A. 3 mL
- B. 90 mL
- C. 2 L
- D. 20 L

20 Brandi has five hanging flower baskets. She waters each with 500 milliliters of water. How much water does Brandi use to water the flower baskets? 3.MD.2

- A. 25 mL
- B. 250 mL
- C. 1,000 mL
- D. 2,500 mL

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Practice 39

Measure Volume

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(3.MD.2)

1. A. A spoon would hold a very small amount of liquid, so 10 mL is the most reasonable estimate.
2. C. $600 - 220 = 380$; The thermos has 380 milliliters of coffee in it.
3. A, F. A hot tub and tank of gas would hold liters of liquid. A bottle of perfume, glass of water, travel-size bottle of shampoo, and bowl of soup would hold less than a liter of liquid.
4. C. A car's oil pan would hold several liters of oil, but not 250 liters. The most reasonable estimate is 4 liters.
5. D. An inground pool holds several thousand liters of liquid. The most reasonable estimate is 50,000 liters.
6. B. The level of the liquid is at 175, and the measuring units are milliliters.
7. C. $900 \div 4 = 225$; 225 milliliters of water are in each cup.
8. D. $220 + 430 = 650$; 650 liters of oil are in the tank.
9. D. A bathtub would hold more than 10 liters of liquid. The most reasonable estimate is 300 liters of water.
10. B. $2 \times 11 = 22$; There are 22 liters of water in the cooler.
11. B. Dentures would be soaked in a small container, which would hold milliliters of liquid. To cover the dentures, the container would have to hold more than 2 milliliters. The most reasonable estimate is 120 milliliters.
12. A. $700 - 120 = 580$; 580 milliliters of shampoo are left in the bottle.
13. A. A small bottle would hold milliliters of liquid, so the most likely item is a bottle of sunscreen.
14. A. An eye dropper holds milliliters of liquid, and a few drops would be used on a microscope plate. The most reasonable estimate is 4 milliliters.
15. C. The level of the liquid is at 3, and the measuring units are milliliters.
16. D. A kitchen sink holds several liters of liquid, so the most reasonable estimate is 16 liters.
17. C. $480 \div 12 = 40$; 40 milliliters of batter are in each paper liner.
18. D. $110 + 140 = 250$; 250 milliliters of water are in the vase.
19. B. Travel-size bottles are smaller than a liter, but they hold more than 3 mL. The most reasonable estimate is 90 milliliters.
20. D. $500 \times 5 = 2,500$; Brandi uses 2,500 mL of water to water the flower baskets.