Lesson 1

Hands On: **Estimate and Measure Capacity**

Homework Helper



Is 1 liter or 1 milliliter a more reasonable estimate for a drop of food coloring Brianne will use to color icing for baking?

Use a liter to measure greater capacity.

Use a milliliter to measure lesser capacity.

A drop of food coloring is a small amount. It is unreasonable to estimate that one drop is a liter of liquid.

So, 1 milliliter of food coloring is a more reasonable estimate.

Practice

Circle the better unit to measure each capacity.

1.



milliliter liter 2.



milliliter

liter

3.



milliliter liter 4.



milliliter liter

How much water is in each container? Circle the amount.

5.



200 mL

400 mL

6.



100 mL

200 mL



Problem Solving

- 7. PRACTICE Use Mental Math Ian is going to water his plants. Is it reasonable to say he will fill the watering can with 3 liters of water? Explain.
- **8.** Gianna is heating a can of soup for lunch. Is it reasonable to say she is heating 3 milliliters or 300 milliliters of soup? Explain.
- **9.** Vincent is painting all four walls of his bedroom. Is it more reasonable to measure the paint he will use in milliliters or liters? Explain.

Vocabulary Check



Match each vocabulary word or set of words to its meaning.

- **10.** capacity/liquid volume
- **11.** liter (L)
- 12. milliliter (mL)
- **13.** unit
- 14. metric units

- a metric unit used for greater capacities
- a standard for measurement
- the amount of liquid a container can hold
- a metric unit used for smaller capacities
- a unit of measure in the metric system.

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Lesson 2

Solve Capacity Problems

Homework Helper



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Phillippe is conducting a science experiment. He puts 2 milliliters of liquid in each of 7 test tubes. How much liquid does Phillippe use altogether?

Write an equation with a symbol for the unknown.

Multiply to find the answer. $2 \times 7 = 1.4$

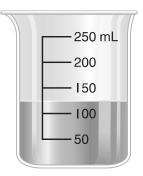
$$2 \times 7 = 14$$

So, Phillippe used 14 milliliters of liquid altogether.

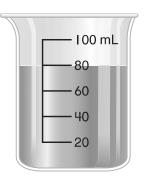
Practice

Algebra Write an equation with a symbol for the unknown. Then solve.

1. How much liquid would there be if you poured another 35 mL into the container?



2. If you poured this liquid in equal amounts into 10 separate containers, how much liquid would be in each container?



Problem Solving

3. Each stew pot can hold 6 liters of stew. If there are 5 stew pots, how much stew could be made at one time?



4. PRACTICE Be Precise Kathleen needs 550 milliliters of cream for a recipe. Does Kathleen have enough cream for her recipe? Explain.



- **5.** Glenna put 850 milliliters of gravy into a gravy boat. John poured 75 milliliters of gravy on his mashed potatoes. How much gravy is left in the gravy boat?
- **6.** Mrs. Hudson made 25 liters of punch to equally pour into 5 punch bowls. How much punch will be poured into each bowl?
- **7.** Claude has 24 milliliters of mouthwash left. He will use the same amount of mouthwash each day for the next three days. How much mouthwash does Claude use each day?

Test Practice

- 8. How much honey does Omar use in five days?
 - **A** 35 milliliters
- © 24 milliliters
- ® 25 milliliters
- ① 11 milliliters

Day	Honey
Monday	5 mL
Tuesday	5 mL
Wednesday	5 mL
Thursday	5 mL
Friday	5 mL



Lesson 3

Hands On: Estimate and Measure Mass

Homework Helper



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Gordon wants to measure the mass of his German shepherd. Is it more reasonable for Gordon to measure his dog's mass in grams or kilograms?

A paper clip has a mass of about 1 gram. A textbook has a mass of about 1 kilogram.

Because Gordon's dog is large, it does not make sense to measure its mass in grams. It is more reasonable for Gordon to measure his dog's mass in kilograms.

Practice

Circle the better unit to measure each mass.

- 1. bowling ball
- 2. zebra

3. cell phone

kilogram gram

kilogram gram

kilogram gram

- **4.** laptop computer
- **5.** pair of socks
- **6.** a marble

gram

kilogram

kilogram gram

gram

kilogram

Circle the better estimate for each mass.

7.



8.



4 grams

4 kilograms

2 grams

2 kilograms

Circle the better estimate for each mass.

9.



20 grams

20 kilograms

10.



3 grams

3 kilograms



Problem Solving

11. PRACTICE Use Mental Math Dylan is making a casserole that serves 4 people. The recipe calls for shredded cheese. Would it be more reasonable for Dylan to measure the mass of the cheese in grams or kilograms? Explain.

12. Paulette needs help moving her file cabinet. Is 40 grams or 40 kilograms a more reasonable estimate for the file cabinet's mass? Explain.

Vocabulary Check



Choose the correct word to complete each sentence.

mass gram kilogram

- **13.** The amount of matter an object has is its ______.
- 14. A baseball bat has a mass of about 1 ______.
- **15.** A penny has a mass of about 1 ______.

Lesson 4

Solve Mass Problems

Homework Helper



Need help? connectED.mcgraw-hill.com

Three small packets of peanuts have a total mass of 30 grams. Each packet has the same mass. What is the mass of 1 packet of peanuts?



Write an equation with a letter for the unknown.

$$30 \div 3 = m$$

Divide to find the answer.

$$30 \div 3 = 10$$

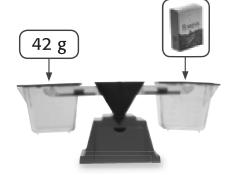
$$m = 10 \text{ grams}$$

So, 1 packet of peanuts has a mass of 10 grams.

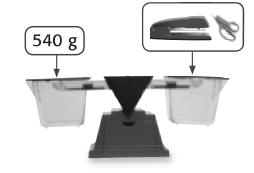
Practice

Algebra Write an equation with a letter for the unknown. Then solve.

1. What is the mass of 2 boxes of raisins?



2. The scissors have a mass of 90 grams. What is the mass of the stapler?



Algebra Solve for the unknown.

- **3.** 511 kilograms $+ \blacksquare = 720$ kilograms
 - = _____ kilograms

- **4.** 90 grams ÷ = 10 grams
 - **=** _____
- **5.** grams 138 grams = 704 grams
- **6.** × 20 kilograms = 80 kilograms
 - **=** _____



Problem Solving

- **7.** Melinda's pair of ski boots and skis have a mass of 6 kilograms. What is the mass of one ski boot and one ski?
- **8.** A full bag of oatmeal has a mass of 560 grams. Cooper uses 80 grams of oatmeal to make breakfast for his family. What is the mass of the remaining oatmeal?
- **9.** Each bag can hold a mass of 3 kilograms. Wade has 24 kilograms of fruit to divide equally. How many bags will he need?
- 10. PRACTICE Use Number Sense Each of the four girls on Chantelle's relay team got a swimming medal. One medal has a mass of 16 grams. What is the total mass of the relay team's medals?



Test Practice

- **11.** Jennifer's cats eat 2 kilograms of food per month. How much food do the cats eat in 8 months?
- |------? kg ------|
 | 2 kg | 2

- A kilograms
- © 14 kilograms
- 16 kilograms

Lesson 5

Tell Time to the Minute

Homework Helper



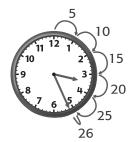
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What time is shown on the clock?



Find the hour.

The hour hand is past the 3, but has not reached the 4. The hour is 3.



Count the minutes.

Count by 5s first. Then count each additional minute.

5, 10, 15, 20, 25, 26

The minutes are 26.

Read: 3:26

Write: three twenty-six or twenty-six minutes after three

Practice

Circle the correct time shown on each digital or analog clock.

1.



2.



3.



6:35

7:35

1:10

11:11

7:03

7:05

4.



5.





2:40

5:40

4:50

5:50

3:22

3:27

Write the time shown on each clock in numbers and words.

7.



Read: _____

Write: _____

8.



Read:

Write:

Seal World

Problem Solving

- **9.** Diane's plane is due to arrive when the hour hand is just past the 3 and the minute hand is on the 4. What time should the plane arrive?
- 10. PRACTICE Identify Structure Clark was born when the hour hand was between 12 and 1 and the minute hand was on 11. What time was he born?

Vocabulary Check



Match each word or group of words to its meaning.

- 11. analog clock
- 60 seconds
- 12. digital clock
- a clock that shows the time with numerals and a colon

13. minute

60 minutes

14. hour

 a clock that shows the time with minute and hour hands

Test Practice

- **15.** Look where the minute hand is pointing. How many minutes are after the hour?
 - A 25 minutes
- © 35 minutes
- **B** 33 minutes
- ① 38 minutes

Time flies!



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MY Homework

Lesson 6

Time Intervals

Homework Helper



Need help? connectED.mcgraw-hill.com

Ramone took his pizza out of the oven at 2:50 P.M. The pizza had baked for 35 minutes. What time did Ramone put the pizza in the oven?

Start at 2:50 P.M. Counting by five-minute intervals, move backward around the clock until you count 35 minutes. The minute hand is on 3, and the hour is between 2 and 3.

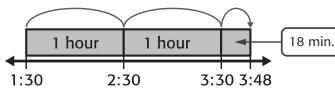
So, Ramone put the pizza in the oven at 2:15 P.M.

Practice

The following are times of parades. Find the time interval for each.

1. Start Time (P.M.) End Time (P.M.)





minutes + _____ minutes + ____ minutes = ____ minutes

2. Start Time (P.M.)



End Time (P.M.) **3.** Start Time (A.M.)







minutes

minutes

Write the time. Then draw the hands on the clock to show the time interval.

4. _____ P.M.







5. _____ A.M.









Problem Solving

- **6.** It took Henry 2 hours and 17 minutes to write his report. He started writing at 3:30 P.M. What time did he finish his report?
- 7. PRACTICE Plan Your Solution Melanie started working in her garden at 8:25 A.M. She took a break at 11:10 A.M. How many minutes did Melanie work before taking a break?

Vocabulary Check



8. Write a definition for a time interval.

Test Practice

- **9.** It takes Wallace 50 minutes to do the grocery shopping. If he starts at 2:12 P.M., what time will he finish?
 - A 2:42 P.M.
- © 3:02 p.m.
- В 2:52 р.м.
- ① 3:07 P.M.

Lesson 7

Problem Solving: Work Backward

Homework Helper



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Miranda will leave at 7:20 P.M. for a sleepover. She wants to be ready 5 minutes early. Miranda needs 45 minutes to do her chores, 20 minutes to shower, and 10 minutes to get dressed. What is the latest time Miranda can begin her chores?

Understand

What facts do you know?

the time Miranda will leave for a sleepover how long it takes Miranda to complete each task Miranda wants to be ready 5 minutes early.

What do you need to find?

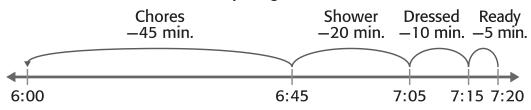
the latest time Miranda can begin her chores

Plan

I will work backward to solve the problem.

S Solve

Use a number line. Mark everything in reverse order.



Miranda needs to start getting ready by 6:00 P.M.

Check

Does the answer make sense?

6:00 P.M. + 80 minutes = 7:20 P.M. So, the answer is correct.



Solve each problem by working backward.

- 1. Selma finished her shift at work at 5:40 P.M. She had been working for 4 hours and 20 minutes. What time did Selma begin her shift?
- My Worki
- 2. Riko has 3 kilograms of potatoes left. She sold 8 kilograms at the farmers' market. She gave half that amount away to neighbors. How many kilograms of potatoes did Riko have to start with?
- 3. Noah earned \$24 last week by pet sitting. He worked 1 hour on Friday and 3 hours on Wednesday. He worked the most hours on Monday. Noah earns \$3 per hour. How many hours did he work on Monday?
- 4. PRACTICE Be Precise It took Blake 20 minutes to walk home from school. He spent 35 minutes doing homework. Then Blake played basketball for 1 hour and 10 minutes. Now it is 5:45 P.M. and time for Blake to eat dinner. What time did he leave the school?
- **5.** Ms. Hirose filled a bucket with water. She used 3 liters of water to rinse her front porch. She used 2 liters of water to fill the bird bath. There are 3 liters of water left in the bucket. How much water did Ms. Hirose have to begin with?