Liquid Volume and Mass Worksheet

Grade 3 · Common Core 3.MD.A.2

> Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

Practice

Builds the skill step by step.

1. Which unit is best for measuring the mass of an apple?
   A. liters
   B. meters
   C. kilograms
   D. grams

2. Which unit is best for measuring how much water a bathtub holds?
   A. centimeters
   B. grams
   C. liters
   D. kilograms

3. Which is the best estimate for the mass of a bicycle?
   A. 12 grams
   B. 12 kilograms
   C. 12 liters
   D. 120 kilograms

4. Point A shows how much water is in a pitcher. How many liters of water are in the pitcher?



5. A bag of rice has a mass of 4 kilograms. Another bag has a mass of 3 kilograms. What is their total mass?

6. A jug holds 8 liters of juice. Mia pours out 3 liters. How many liters are left in the jug?

7. Each bottle holds 2 liters of water. How many liters do 5 bottles hold?

8. A pencil case has a mass of 45 grams. A notebook has a mass that is 30 grams more than the pencil case. What is the mass of the notebook?

9. Which of these holds about 1 liter?

   A. a large water bottle

   B. a spoon

   C. a swimming pool

   D. a bathtub

10. 12 liters of lemonade are poured equally into 4 pitchers. How many liters go in each pitcher?

ALBERT

Name _____ Date _____

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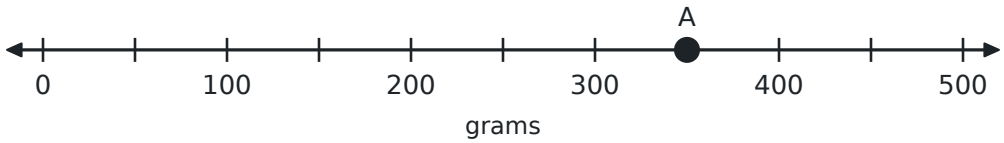
On Level

Grade-level practice.

1. Point A shows the mass of a bag of grapes on a kitchen scale. What is the mass of the grapes?



2. A fish tank has 36 liters of water. Ravi adds 27 more liters. How many liters of water are in the tank now?

3. A dog has a mass of 32 kilograms. A puppy has a mass of 9 kilograms. How much more mass does the dog have than the puppy?

4. Each bag of flour has a mass of 5 kilograms. What is the mass of 7 bags of flour?

5. A cooler holds 40 liters of water. Kim fills it with a bucket that holds 5 liters. How many full buckets does she need to fill the cooler?

6. Which is the best estimate for the mass of a paper clip?

   A. 10 kilograms

   B. 1 kilogram

   C. 1 gram

   D. 100 grams

7. Which is the best estimate for how much water a full kitchen sink holds?

   A. 20 liters

   B. 2 liters

   C. 200 liters

   D. 2,000 liters

8. A melon has a mass of 760 grams. A bunch of grapes has a mass of 180 grams. What is their total mass?

9. The table shows how much water each plant got this week. How many more liters did the tomato plant get than the pepper plant?

Plant	Water (liters)
Tomato	14
Pepper	9
Bean	11

10. Ms. Lin has 24 liters of paint. She pours the same amount into 6 cans. How many liters of paint are in each can?

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Challenge

Multi-step and word problems that stretch it.

1. A crate holds 6 watermelons. Each watermelon has a mass of 4 kilograms. The empty crate has a mass of 3 kilograms. What is the total mass of the crate with the watermelons in it?

2. Jon fills a 50-liter rain barrel. He uses 8 liters a day to water his garden for 4 days. How many liters are left in the barrel?

3. Lily says a newborn baby has a mass of about 4 grams. What is wrong with her estimate?

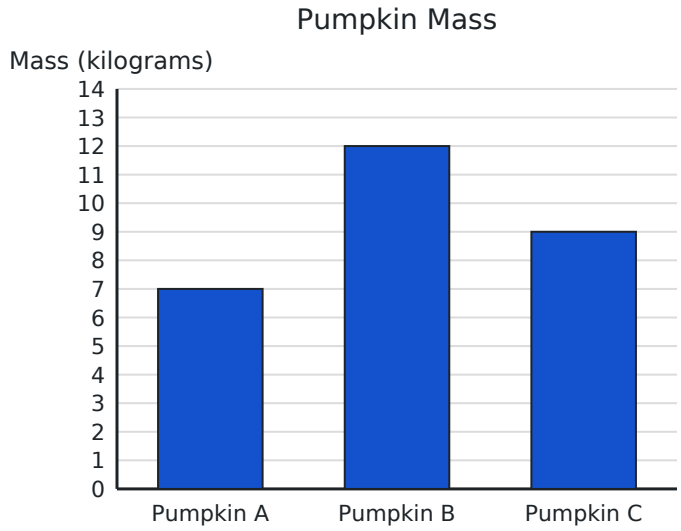
   A. Nothing is wrong. 4 grams is a good estimate.

   B. Grams are too small. A newborn baby is about 4 kilograms.

   C. She should measure a baby in liters.

   D. A newborn baby is about 40 kilograms.

4. The bar graph shows the mass of three pumpkins. How much more mass does the heaviest pumpkin have than the lightest pumpkin?



5. Ana has 3 jugs. Each jug holds 4 liters of water. She pours all of it into a tub that already has 15 liters. How many liters of water are in the tub now?

6. Ben's backpack with 4 books in it has a mass of 6 kilograms. The empty backpack has a mass of 2 kilograms. Each book has the same mass. What is the mass of one book?

7. Which group of boxes has the greatest total mass?

   A. 1 box of 7 kilograms

   B. 2 boxes of 4 kilograms each

   C. 4 boxes of 2 kilograms each

   D. 3 boxes of 3 kilograms each

8. Point A shows the water in a tank before it rained. Point B shows the water after it rained. How many liters of rain fell into the tank?



9. A bakery has 40 kilograms of flour. It uses 4 kilograms each day. How many kilograms are left after 7 days?

10. Sam needs 24 liters of water to fill a wading pool. His bucket holds 3 liters. He has already poured in 5 full buckets. How many more full buckets does he need?