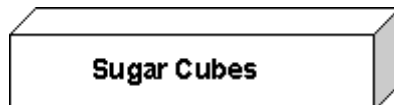


5th Grade Chapter 10 – Measuring Solids**Multiple Choice**

Identify the letter of the choice that best completes the statement or answers the question.

1. A box contains 252 sugar cubes. You open the top of the box and count 12 cubes across the front and 7 cubes along a side. How many layers of sugar cubes are in the box?



- A. 1
B. 2
C. 3
D. 4
2. A cube has a volume of 64 cubic inches. What is the length of each edge of the cube?
A. 6 in.
B. 8 in.
C. 3 in.
D. 4 in.
3. Which of the following units is greater than a quart?
A. gallon
B. tablespoon
C. cup
D. pint
4. Bonnie made 9 qt of chicken noodle soup in a big pot, then served six $1\frac{1}{2}$ -c bowls of soup to her family. How much soup is left in the pot? (1 qt = 4 c)
A. none
B. 7 qt 5 c
C. 6 qt $\frac{3}{4}$ c
D. 6 qt 3 c
5. A can contains 240 mL of beef broth. Jose poured 6 cans of broth into a pot for a soup recipe. How many liters of broth did Jose pour into the soup?
A. 1,440 L
B. 144 L
C. 14.4 L
D. 1.44 L
6. Isaac fills a water bottle each morning and takes it to camp. He drinks all the water with his lunch. Which of the following is the best estimate of the amount of water he drinks at lunch?
A. 7.5 L
B. 0.75 L
C. 7.5 mL
D. 75 mL
7. The curb weight of a new car is 3,347 pounds. How much does the car weigh?
A. less than 1 ton
B. between 1 and 2 tons
C. between 2 and 3 tons
D. between 3 and 4 tons
8. Which of the following units would you use to weigh a cracker?
A. ounce
B. fluid ounce
C. ton
D. pound

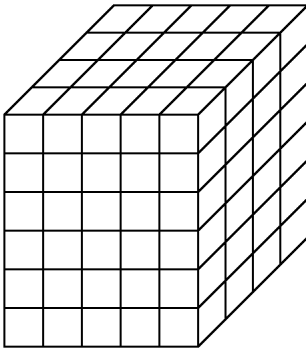
9. Which of the following is equivalent to 60 g?
- A. 6,000 mg C. 0.006 kg
B. 0.6 kg D. 60,000 mg
10. The following table shows the information given on a can of turkey chili. Which of the following lists the components of turkey chili from the greatest to the least amount per serving?

Turkey Chili Components	Amount Per Serving
Total Fat	3.5 g
Cholesterol	25 mg
Sodium	1,110 mg
Total Carbohydrate	34 g
Protein	16 g

- A. sodium, total carbohydrate, cholesterol, protein, total fat
B. total carbohydrate, cholesterol, protein, total fat, sodium
C. sodium, total fat, total carbohydrate, cholesterol, protein
D. total carbohydrate, protein, total fat, sodium, cholesterol

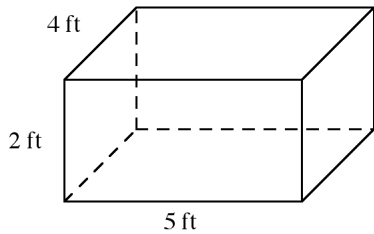
Short Answer

11. In science class, students stacked cubical weights as shown below. What is the volume in cubic units of this stack of weights?



$\text{Volume} = \text{length} \times \text{width} \times \text{height}$
--

12. The Watson's new freezer came in a box similar to the one shown. What is the volume of the box?



13. Yansa put 2 cups of lemonade into the pitcher shown. How many more cups of lemonade does he need to fill the pitcher? (1 quart = 4 cups)



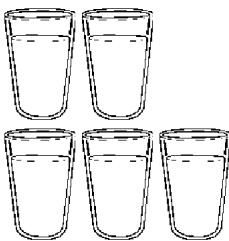
Capacity: 2 quarts

14. Clara needs 80 tablespoons of paint to finish her art project. The store only sells paint in the capacities shown. Which of the following has exactly 80 tablespoons of paint?

6 teaspoons = 2 tablespoons = 1 fluid ounce

8 fluid ounces = 1 cup

15. It is recommended that you have 8 servings of water per day. A serving of water is about 237 mL. If Li drank 5 servings, about how many liters of water did he drink?



16. An aluminum can has a capacity of 2.79 L. How many milliliters of soup can it hold? (1 L = 1000 mL)



Name: _____

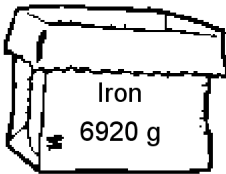
Form A

17. Leonor kept track of how much cereal she ate for two months and found that she ate 192 ounces of cereal in that time. How many pounds is that? (16 ounces = 1 pound)
18. Charles is purchasing the package of dog food shown.

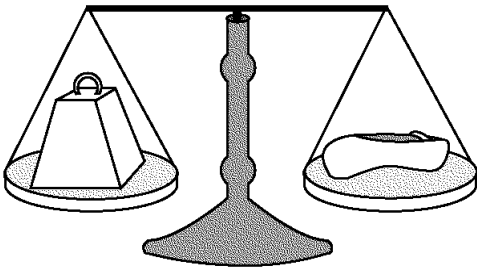


How many 8-ounce servings can he feed his dog?

19. Harold has the element shown for his science experiment. How many kilograms of the material does he have? (1000 grams = 1 kilogram)



20. On one side of the balance scale, Henry placed a 7-gram weight. On the other side of the scale, he placed a ballet slipper. How many milligrams does the slipper weigh? (1000 milligrams = 1 gram)



Name: _____

Form A

Other

21. **Bread Recipe** Fely wants to make Mexican bread for International Day at school. The recipe makes 8 servings. She wants to make 15 times the recipe.

Part A The recipe calls for 60 milliliters of oil. Will 1 liter of oil be enough? (1 liter = 1,000 milliliter)

Show All Work

Answer _____

Part B How many servings of Mexican bread will 15 times the recipe make?

Show All Work

Answer _____ servings

5th Grade Chapter 10 – Measuring Solids

Answer Section

MULTIPLE CHOICE

1. ANS: C REF: 1005 Lesson 10-5: Volume
OBJ: Use cubes and a formula to find the volume of rectangular prisms.
STO: M.UN.05.02 TOP: Intervention K36: Volume, NCTM 3-5: Geom.4.5
KEY: solids, volume, geometry, whole numbers
2. ANS: D REF: 1005 Lesson 10-5: Volume
OBJ: Use cubes and a formula to find the volume of rectangular prisms.
STO: M.UN.05.02 TOP: Intervention K36: Volume, NCTM 3-5: Geom.4.5
KEY: solids, volume, geometry, whole numbers
3. ANS: A REF: 1006 Lesson 10-6: Customary Units of Capacity
OBJ: Change among the customary units of capacity and add and subtract customary units of capacity.
STO: M.UN.05.04
TOP: Intervention K6: Using Customary Units of Capacity, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2, NCTM 3-5: Meas.1.3
KEY: capacity, customary measurement, measurement
4. ANS: D REF: 1006 Lesson 10-6: Customary Units of Capacity
OBJ: Change among the customary units of capacity and add and subtract customary units of capacity.
STO: M.UN.05.04
TOP: Intervention K6: Using Customary Units of Capacity, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2, NCTM 3-5: Meas.1.3
KEY: capacity, customary measurement, measurement, whole numbers, mixed numbers
5. ANS: D REF: 1007 Lesson 10-7: Metric Units of Capacity
OBJ: Estimate and measure capacity using metric measures, and change milliliters to liters and vice versa.
STO: M.UN.05.04
TOP: Intervention K7: Using Milliliters and Liters, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2, NCTM 3-5: Meas.1.3
KEY: capacity, metric measurement, measurement
6. ANS: B REF: 1007 Lesson 10-7: Metric Units of Capacity
OBJ: Estimate and measure capacity using metric measures, and change milliliters to liters and vice versa.
STO: M.UN.05.04
TOP: Intervention K7: Using Milliliters and Liters, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2, NCTM 3-5: Meas.1.3
KEY: capacity, metric measurement, measurement
7. ANS: B REF: 1008 Lesson 10-8: Customary Units of Weight
OBJ: Change between customary units of weight, and add and subtract customary units of weight.
STO: M.UN.05.04
TOP: Intervention K8: Using Ounces and Pounds, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2, NCTM 3-5: Meas.1.3
KEY: weight/mass, customary measurement, measurement
8. ANS: A REF: 1008 Lesson 10-8: Customary Units of Weight
OBJ: Change between customary units of weight, and add and subtract customary units of weight.
STO: M.UN.05.04
TOP: Intervention K8: Using Ounces and Pounds, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2, NCTM 3-5: Meas.1.3
KEY: weight/mass, customary measurement, measurement

9. ANS: D REF: 1009 Lesson 10-9: Metric Units of Mass
 OBJ: Estimate and measure mass using metric measures, and change between these measures.
 STO: M.UN.05.04
 TOP: Intervention K9: Using Grams and Kilograms, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2,
 NCTM 3-5: Meas.1.3 KEY: weight/mass, metric measurement, measurement
10. ANS: D REF: 1009 Lesson 10-9: Metric Units of Mass
 OBJ: Estimate and measure mass using metric measures, and change between these measures.
 STO: M.UN.05.04
 TOP: Intervention K9: Using Grams and Kilograms, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2,
 NCTM 3-5: Meas.1.3
 KEY: weight/mass, metric measurement, measurement, Nutrition

SHORT ANSWER

11. ANS:
 120 cubic units
- REF: 1005 Lesson 10-5: Volume
 OBJ: Use cubes and a formula to find the volume of rectangular prisms.
 STO: M.UN.05.02 TOP: Intervention K36: Volume, NCTM 3-5: Geom.4.5
 KEY: solids, volume, geometry, whole numbers
12. ANS:
 40 cubic feet
- REF: 1005 Lesson 10-5: Volume
 OBJ: Use cubes and a formula to find the volume of rectangular prisms.
 STO: M.UN.05.02 TOP: Intervention K36: Volume, NCTM 3-5: Geom.4.5
 KEY: solids, volume, geometry, whole numbers
13. ANS:
 6 cups
- REF: 1006 Lesson 10-6: Customary Units of Capacity
 OBJ: Change among the customary units of capacity and add and subtract customary units of capacity.
 STO: M.UN.05.04
 TOP: Intervention K6: Using Customary Units of Capacity, NCTM 3-5: Meas.1.1, NCTM 3-5:
 Meas.1.2, NCTM 3-5: Meas.1.3
 KEY: capacity, customary measurement, measurement, whole numbers

14. ANS:



5 cups

REF: 1006 Lesson 10-6: Customary Units of Capacity

OBJ: Change among the customary units of capacity and add and subtract customary units of capacity.

STO: M.UN.05.04

TOP: Intervention K6: Using Customary Units of Capacity, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2, NCTM 3-5: Meas.1.3

KEY: capacity, customary measurement, Visual Arts, measurement, whole numbers

15. ANS:

1.185 L

REF: 1007 Lesson 10-7: Metric Units of Capacity

OBJ: Estimate and measure capacity using metric measures, and change milliliters to liters and vice versa. STO: M.UN.05.04

TOP: Intervention K7: Using Milliliters and Liters, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2, NCTM 3-5: Meas.1.3

KEY: capacity, metric measurement, Health Education, measurement

16. ANS:

2,790 mL

REF: 1007 Lesson 10-7: Metric Units of Capacity

OBJ: Estimate and measure capacity using metric measures, and change milliliters to liters and vice versa. STO: M.UN.05.04

TOP: Intervention K7: Using Milliliters and Liters, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2, NCTM 3-5: Meas.1.3

KEY: capacity, metric measurement, measurement

17. ANS:

12 pounds

REF: 1008 Lesson 10-8: Customary Units of Weight

OBJ: Change between customary units of weight, and add and subtract customary units of weight.

STO: M.UN.05.04

TOP: Intervention K8: Using Ounces and Pounds, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2, NCTM 3-5: Meas.1.3

KEY: weight/mass, customary measurement, measurement

18. ANS:

18 servings

REF: 1008 Lesson 10-8: Customary Units of Weight

OBJ: Change between customary units of weight, and add and subtract customary units of weight.

STO: M.UN.05.04

TOP: Intervention K8: Using Ounces and Pounds, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2, NCTM 3-5: Meas.1.3

KEY: weight/mass, customary measurement, measurement, whole numbers

19. ANS:

6.92 kilograms

REF: 1009 Lesson 10-9: Metric Units of Mass

OBJ: Estimate and measure mass using metric measures, and change between these measures.

STO: M.UN.05.04

TOP: Intervention K9: Using Grams and Kilograms, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2, NCTM 3-5: Meas.1.3

KEY: weight/mass, metric measurement, Science, measurement

20. ANS:

7,000 milligrams

REF: 1009 Lesson 10-9: Metric Units of Mass

OBJ: Estimate and measure mass using metric measures, and change between these measures.

STO: M.UN.05.04

TOP: Intervention K9: Using Grams and Kilograms, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2, NCTM 3-5: Meas.1.3

KEY: weight/mass, metric measurement, measurement

OTHER

21. ANS:

Part A: Yes*Sample Work:* 60 milliliters \times 15 times the recipe = 900 milliliters. 900 milliliters $<$ 1,000 milliliters**Part B:** 120 servings*Sample Work:* 8 servings \times 15 times the recipe

RUBRIC	
4 points	All answers are correct AND the student's work is reasonable. Allow 1 point for each correct answer and one point for each explanation.
3 points	Three elements are correct.
2 points	Two elements are correct.
1 point	One element is correct.

REF: 1007 Lesson 10-7: Metric Units of Capacity

OBJ: Estimate and measure capacity using metric measures, and change milliliters to liters and vice versa. STO: M.UN.05.04

TOP: Intervention K7: Using Milliliters and Liters, NCTM 3-5: Meas.1.1, NCTM 3-5: Meas.1.2, NCTM 3-5: Meas.1.3

KEY: metric measurement, capacity, multiplication, 4-point rubric