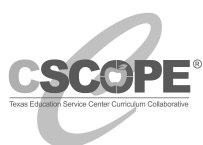


Mathematics Grade 6 Unit 08: Measurement: Capacity, Weight, Time,  
Temperature, and Volume 2012-2013



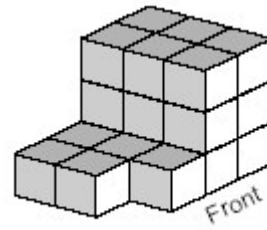
- 1 The table below shows how the volume of a rectangular prism changes as its length increases and its width and height remain the same.

Length ( <i>l</i> ) (feet)	Volume ( <i>V</i> ) (cubic feet)
4	240
6	360
8	480
9	540

Which of the following equations best represents the relationship between the rectangular prism's length(*l*) and its volume(*V*)?

- A**  $V = 10l + 200$
- B**  $V = 60l$
- C**  $V = l \div 60$
- D**  $V = l + 236$
- 2 Which of the following is NOT equivalent to three quarts?
- F** 6 pints
- G**  $\frac{3}{4}$  gallon
- H** 12 cups
- J** 104 ounces
- 3 Abby bought one package of cookies that weighed 1.5 pounds and another package that weighed 2 pounds 2 ounces. What was the combined weight of the two packages of cookies she bought?
- A** 3 pounds 2.25 ounces
- B** 3 pounds 10 ounces
- C** 3.45 pounds
- D** 3.7 pounds

- 4 Find the volume of the figure shown below.



- F** 23 cubes
- G** 17 cubes
- H** 15 cubes
- J** 6 cubes
- 5 David drove 150 miles and used eight gallons of gasoline. Rebecca drove 100 miles and used six gallons of gasoline. David said that they used gasoline at the same rate. Is he correct?
- A** No, because the mileage per gallon of gas is not equivalent.
- B** Yes, because even though they drove different distances, the amount of gas used balanced out the difference.
- C** No, because they drove different distances.
- D** Yes, because the mileage per gallon of gas is equivalent.

- 6 This table shows the mass of four dogs in kilograms and grams.

Kilograms ( <i>k</i> )	Grams ( <i>g</i> )
25.5	25,500
21	21,000
9	9,000
11.5	11,500

If a fifth dog weighs 14.5 kilograms, which equation could be used to find its mass, *g*, in grams?

- F**  $g = 14.5 \times 1,000$   
**G**  $g = 14.5 + 1,000$   
**H**  $g = 14.5 \div 100$   
**J**  $g = 14.5 - 1,000$
- 7 At a farmer's market, strawberries are priced at 2 pounds for \$4. Winnie needs 6 pounds to make strawberry shortcake for her family. Which equation can be used to find *S*, the total price of Winnie's strawberries?
- A**  $S = (6 \times 2) \div \$4$   
**B**  $S = (\$4 \div 2) \times 6$   
**C**  $S = (2 \times \$4) \div 6$   
**D**  $S = (6 \div \$4) \times 2$

- 8 This table shows the capacity of commercial containers of milk in milliliters and liters.

Milliliters ( <i>ml</i> )	Liters ( <i>l</i> )
4,000	4
5,000	5
7,000	7
11,000	11

Which of the following equations best represents the relationship between milliliters (*ml*) and liters (*l*)?

- F**  $l = ml \div 100$   
**G**  $l = ml \div 1000$   
**H**  $l = 100 ml$   
**J**  $l = 1,000 ml$

- 9 Which table represents the relationship between cups and pints?

**A**

Cups	Pints
1	$\frac{1}{2}$
2	1
3	$1\frac{1}{2}$
4	2

**B**

Cups	Pints
$\frac{1}{2}$	1
1	2
$1\frac{1}{2}$	3
2	4

**C**

Cups	Pints
1	2
2	4
3	6
4	8

**D**

Cups	Pints
2	$\frac{1}{2}$
4	1
6	$1\frac{1}{2}$
8	2

- 10 In science class, Ruben is working with a container of liquid that holds 25,000 milliliters. He has to pour the liquid into liter bottles. About how many liter bottles would he be able to fill?

- F** 15 liters  
**G** 25 liters  
**H** 35 liters  
**J** 45 liters

- 11 The table below shows the relationship between quarts and gallons.

Quarts ( <i>q</i> )	Gallons ( <i>g</i> )
5	$1\frac{1}{4}$
6	$1\frac{1}{2}$
8	2
9	$2\frac{1}{4}$

Which of the following sentences best describes the relationship between the size of a quart-sized container compared to a gallon-sized container?

- A** A quart-sized container is one-fourth the size of a gallon-sized container.  
**B** A gallon-sized container is four more than the size of a quart-sized container.  
**C** A quart-sized container is four times the size of a gallon-sized container.  
**D** A gallon-sized container is one-fourth the size of a quart-sized container.
- 12 Seth is using a large shoe box to store his baseball cards. The length of the box is 12 inches and the height is 6 inches. If the volume of Seth's box is 288 cubic inches, how wide is the box?

**13** This table shows the length, width, height, and volume of several boxes.

Box	Length (in inches)	Width (in inches)	Height (in inches)	Volume (in cubic inches)
A	4	3	2	24
B	6	5	4	120
C	8	7	6	336
D	10	9	8	720

A. What process was used to determine the volume of each box in the table above?

B. Kim has a jewelry box to give to her best friend on her friend's birthday. The jewelry box is 9 inches long, 8 inches wide, and 6 inches tall. Which box should she use if she wants to gift wrap the jewelry box for her friend?

Why?

## Test Key

### Mathematics Grade 6 Unit 08: Measurement: Capacity, Weight, Time, Temperature, and Volume 2012-2013

##	Item #	Correct Answer	Primary SE	Secondary SE	Obj/Cat
1	M061150033D	B	6.4(B) [S]	6.12(A) [P]	STAAR: M2
2	M061092871D	J	6.8(D) [S]	None	STAAR: M4
3	M061092891D	B	6.8(B) [R]	6.11(B) [P]	STAAR: M4
4	M061092901D	F	6.8(B) [R]	6.11(C) [P]	STAAR: M4
5	M061092913D	A	6.3(C) [R]	6.12(A) [P]	STAAR: M2
6	M061150041D	F	6.4(B) [S]	6.13(A) [P]	STAAR: M2
7	M063023217	B	6.2(E) [R]	6.12(A) [P]	STAAR: M2
8	M061150046D	G	6.8(D) [S]	6.12(A) [P]	STAAR: M4
9	M061150052D	A	6.8(D) [S]	None	STAAR: M4
10	M061151574D	G	6.3(C) [R]	6.11(A) [P]	STAAR: M2
11	LOC20686	A	6.8(D) [S]	6.12(A) [P]	STAAR: M4
12	M061092894D	4 inches	6.8(B) [R]	6.11(D) [P]	STAAR: M4
13	M061092899D	A. $V = lwh$  B. Box D because she needs extra room for the jewelry box to fit inside.	6.4(B) [S]	6.12(A) [P]	STAAR: M2