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# ***New York State Testing Program***

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## **Mathematics Test Session 1**

**Grade 5**

**v202**

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<b>Released Questions</b>
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# Session 1



## TIPS FOR TAKING THE TEST

Here are some suggestions to help you do your best:

- Read each question carefully and think about the answer before making your choice.
- You have been provided with mathematics tools (a ruler and a protractor) and a reference sheet to use during the test. It is up to you to decide when each tool and the reference sheet will be helpful. You should use mathematics tools and the reference sheet whenever you think they will help you to answer the question.

# Grade 5 Mathematics Reference Sheet

## **CONVERSIONS**

1 mile = 5,280 feet

1 mile = 1,760 yards

1 pound = 16 ounces

1 ton = 2,000 pounds

1 cup = 8 fluid ounces

1 pint = 2 cups

1 quart = 2 pints

1 gallon = 4 quarts

1 liter = 1,000 cubic centimeters

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## **FORMULAS**

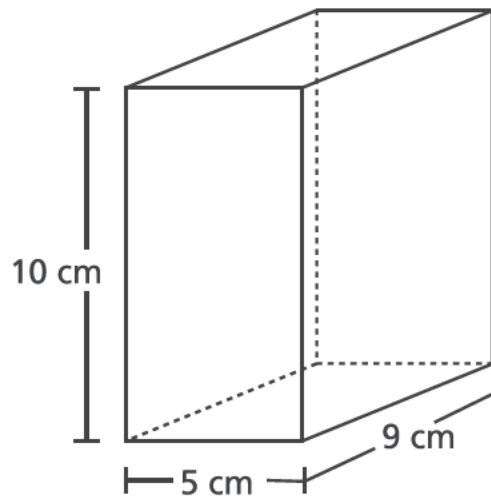
**Right Rectangular Prism**

$$V = Bh \text{ or } V = lwh$$

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1

A gift box is in the shape of a right rectangular prism, as pictured below.



What is the volume, in cubic centimeters, of the gift box?

- A 24
- B 45
- C 225
- D 450

2

What is the sum of  $\frac{2}{10} + \frac{6}{100}$ ?

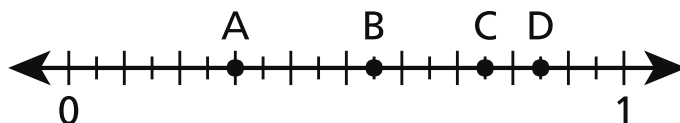
- A  $\frac{8}{10}$
- B  $\frac{8}{100}$
- C  $\frac{26}{10}$
- D  $\frac{26}{100}$

**GO ON**

- 3 On Saturday, Mark sold  $2\frac{7}{8}$  gallons of lemonade. On the same day, Regan sold  $\frac{2}{3}$  as much lemonade as Mark. How much lemonade, in gallons, did Regan sell?

- A  $1\frac{5}{16}$   
B  $1\frac{11}{12}$   
C  $2\frac{7}{12}$   
D  $4\frac{5}{16}$

- 4 Which point on the number line below represents a value of 0.75?



- A point A  
B point B  
C point C  
D point D

**5**

Which comparison is true?

**A**      $2.919 > 2.94$

**B**      $0.99 < 0.569$

**C**      $1.27 > 1.189$

**D**      $3.861 < 3.75$

**6**

Betty has 3 cats and 4 dogs. She feeds each of them one scoop of food twice a day. Which expression can be used to show how many scoops Betty feeds her pets in one day?

**A**      $(2 \times 3) \times 4$

**B**      $(2 \times 3) + 4$

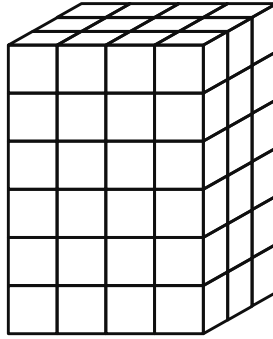
**C**      $2 + (3 + 4)$

**D**      $2 \times (3 + 4)$

**GO ON**

**7**

A diagram of a rectangular prism filled with unit cubes is shown below. Each unit cube has side lengths measuring 1 foot.



What is the volume, in cubic feet, of the rectangular prism?

- A 12
- B 13
- C 54
- D 72

**8**

What is the value of the expression below?

$$[(3 \times 4) - 6] + 4 \times 2$$

- A 4
- B 14
- C 20
- D 30

**GO ON**

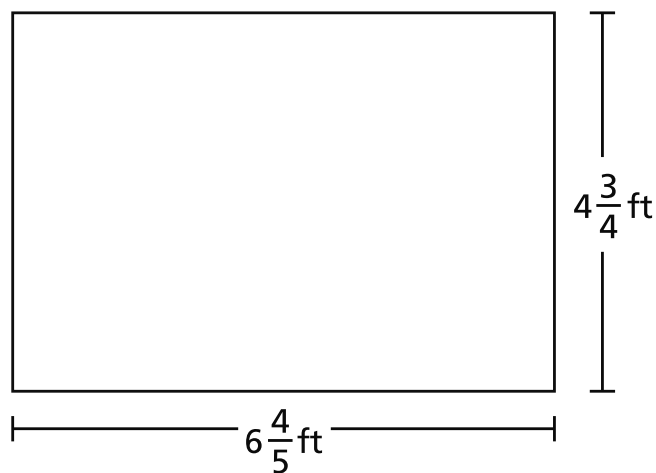
9

Ms. Reed makes salad dressing by combining oil and vinegar. She combines 8 fluid ounces of oil and 3 fluid ounces of vinegar to make one batch. Ms. Reed makes 3 batches of salad dressing. How many total cups of salad dressing does she make?

- A  $1\frac{3}{8}$  cups
- B  $2\frac{1}{16}$  cups
- C  $2\frac{3}{4}$  cups
- D  $4\frac{1}{8}$  cups

10

What is the area, in square feet, of the rectangle shown below?



- A  $11\frac{11}{20}$
- B  $24\frac{12}{20}$
- C  $27\frac{4}{20}$
- D  $32\frac{6}{20}$

**GO ON**



**11**

Ed hiked 3 kilometers on Saturday and swam 2 kilometers on Sunday. How many total meters did Ed hike and swim on Saturday and Sunday?

- A 50
- B 500
- C 5,000
- D 50,000

**12**

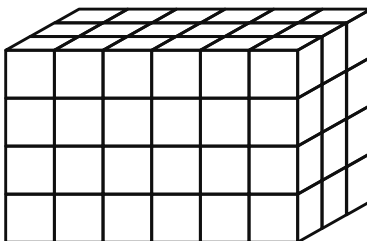
Which expression can be used to find the value of the expression shown below?

$$1,284 \div 4$$

- A  $(1,200 \div 4) \times (84 \div 4)$
- B  $(1,200 \div 4) \div (84 \div 4)$
- C  $(1,200 \div 4) + (84 \div 4)$
- D  $(1,200 \div 4) - (84 \div 4)$

13

Which expression **cannot** be used to determine the volume of the rectangular prism pictured below?



- A  $12 \times 6$
- B  $18 \times 4$
- C  $6 \times 3 \times 4$
- D  $6 \times 4 \times 6$

14

What is 15.74 rounded to the nearest whole number?

- A 10
- B 15
- C 16
- D 20

**GO ON**

- 15** Jack puts  $\frac{1}{3}$  pound of birdseed into his bird feeder every time he fills it. How many times can Jack fill his bird feeder with 4 pounds of birdseed?

- A**  $1\frac{1}{3}$
- B**  $3\frac{2}{3}$
- C** 11
- D** 12

- 16** Carlos makes 1 pound of snack mix using nuts, raisins, and cereal. The list below shows how many pounds of nuts and raisins he uses.

- $\frac{1}{3}$  pound of nuts
- $\frac{2}{5}$  pound of raisins

How much cereal, in pounds, does Carlos use?

- A**  $\frac{3}{8}$
- B**  $\frac{5}{8}$
- C**  $\frac{4}{15}$
- D**  $\frac{11}{15}$

- 17** Tara lives  $\frac{3}{4}$  mile from the park. Nikhil lives  $6\frac{2}{3}$  times as far as Tara from the park. How far, in miles, does Nikhil live from the park?

- A** 2
- B** 5
- C**  $5\frac{1}{6}$
- D**  $8\frac{8}{9}$

- 18** Which statement describes the product of the expression  $5 \times \frac{1}{2}$ ?

- A** It is less than  $\frac{1}{2}$ .
- B** It is greater than 5.
- C** It is between 5 and 6.
- D** It is between  $\frac{1}{2}$  and 5.

**19** What is the value of the expression  $\frac{1}{7} \div 5$ ?

**A**  $\frac{1}{12}$

**B**  $\frac{1}{35}$

**C**  $\frac{5}{7}$

**D**  $\frac{6}{7}$

**20** Cole has a rectangular garden with an area of 16.02 square meters. The length of the garden is 4.5 meters. What is the width, in meters, of the garden?

**A** 3.56

**B** 11.52

**C** 16.12

**D** 20.52

**21** A school raised a total of \$1,648 to purchase new books. The money raised will be shared equally among 8 different classrooms. What is the total amount of money each classroom will receive?

**A** \$206

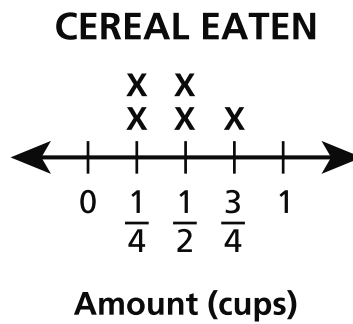
**B** \$207

**C** \$260

**D** \$270

**GO ON**

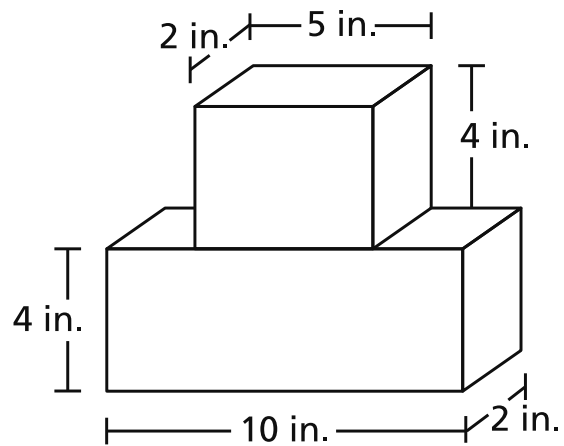
The line plot below shows the amount of cereal Shyanne ate in 5 days.



What is the total number of cups of cereal that Shyanne ate in the 5 days?

- A  $1\frac{1}{2}$
- B  $1\frac{3}{4}$
- C  $1\frac{4}{6}$
- D  $2\frac{1}{4}$

Lana used the two blocks pictured in the diagram to build a tower.



**LANA'S TOWER**

What is the total volume, in cubic inches, of the tower Lana built?

- A 27
- B 80
- C 116
- D 120

**THE STATE EDUCATION DEPARTMENT**  
**THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234**  
**2021 Mathematics Tests Map to the Standards**  
**Grade 5 Released Questions**

Question	Type	Key	Points	Standard	Cluster	Subscore	Secondary Standard(s)
<b>Session 1</b>							
1	Multiple Choice	D	1	CCSS.Math.Content.5.MD.C.5b	Measurement and Data	Measurement and Data	
2	Multiple Choice	D	1	CCSS.Math.Content.4.NF.C.5	Number and Operations - Fractions	Number and Operations - Fractions	
3	Multiple Choice	B	1	CCSS.Math.Content.5.NF.B.6	Number and Operations - Fractions	Number and Operations - Fractions	
4	Multiple Choice	C	1	CCSS.Math.Content.4.NF.C.6	Number and Operations in Base Ten	Number and Operations in Base Ten	
5	Multiple Choice	C	1	CCSS.Math.Content.5.NBT.A.3b	Number and Operations in Base Ten	Number and Operations in Base Ten	
6	Multiple Choice	D	1	CCSS.Math.Content.5.OA.A.2	Operations and Algebraic Thinking		
7	Multiple Choice	D	1	CCSS.Math.Content.5.MD.C.4	Measurement and Data	Measurement and Data	
8	Multiple Choice	B	1	CCSS.Math.Content.5.OA.A.1	Operations and Algebraic Thinking		
9	Multiple Choice	D	1	CCSS.Math.Content.5.MD.A.1	Measurement and Data	Measurement and Data	
10	Multiple Choice	D	1	CCSS.Math.Content.5.NF.B.4b	Number and Operations - Fractions	Number and Operations - Fractions	
11	Multiple Choice	C	1	CCSS.Math.Content.4.MD.A.2	Measurement and Data	Measurement and Data	
12	Multiple Choice	C	1	CCSS.Math.Content.5.NBT.B.6	Number and Operations in Base Ten	Number and Operations in Base Ten	
13	Multiple Choice	D	1	CCSS.Math.Content.5.MD.C.5a	Measurement and Data	Measurement and Data	
14	Multiple Choice	C	1	CCSS.Math.Content.5.NBT.A.4	Number and Operations in Base Ten	Number and Operations in Base Ten	
15	Multiple Choice	D	1	CCSS.Math.Content.5.NF.B.7c	Number and Operations - Fractions	Number and Operations - Fractions	
16	Multiple Choice	C	1	CCSS.Math.Content.5.NF.A.2	Number and Operations - Fractions	Number and Operations - Fractions	
17	Multiple Choice	B	1	CCSS.Math.Content.5.NF.B.6	Number and Operations - Fractions	Number and Operations - Fractions	
18	Multiple Choice	D	1	CCSS.Math.Content.5.NF.B.5a	Number and Operations - Fractions	Number and Operations - Fractions	
19	Multiple Choice	B	1	CCSS.Math.Content.5.NF.B.7a	Number and Operations - Fractions	Number and Operations - Fractions	
20	Multiple Choice	A	1	CCSS.Math.Content.5.NBT.B.7	Number and Operations in Base Ten	Number and Operations in Base Ten	
21	Multiple Choice	A	1	CCSS.Math.Content.5.NBT.B.6	Number and Operations in Base Ten	Number and Operations in Base Ten	
22	Multiple Choice	D	1	CCSS.Math.Content.5.MD.B.2	Measurement and Data	Measurement and Data	
23	Multiple Choice	D	1	CCSS.Math.Content.5.MD.C.5c	Measurement and Data	Measurement and Data	

This item map is intended to identify the primary analytic skills necessary to successfully answer each question. However, some questions measure proficiencies described in multiple standards, including a balanced combination of procedural and conceptual understanding.