

Student Name:



2015-2016

5th Grade Math

1st Benchmark

**Huntersville Elementary School
North Carolina**

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CALCULATOR INACTIVE

The items in this test are based on the Common Core State Standards for Mathematics.

DIRECTIONS FOR THE CALCULATOR INACTIVE SECTION OF THE TEST:

- Calculators may not be used during this test.
- Read each problem carefully.
- Choose the best answer from the choices given.
- Fractions in some answer choices may have been simplified. Check each answer choice to see if this has been done.
- Diagrams used in the test may not be drawn to scale.
- Stop when you see the words "STOP. END OF CALCULATOR INACTIVE SECTION."
- When you have completed the calculator inactive questions, read and follow the directions at the end of this section of the test.



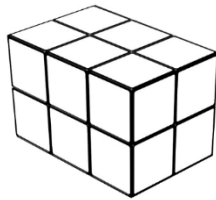
1. Which expression represents the statement, "the difference of 200 and 50 multiplied by 4"?
- A $4 \times 200 - 50$
- B $4 \times (200 - 50)$
- C $200 + 50 \times 4$
- D $(200 + 50) \times 4$
2. Which expression has the same sum as $\frac{2}{3} + \frac{3}{4}$?
- A $\frac{3}{3} + \frac{4}{3}$
- B $\frac{4}{6} + \frac{6}{6}$
- C $\frac{8}{7} + \frac{9}{7}$
- D $\frac{8}{12} + \frac{9}{12}$
3. Bruno uses $\frac{2}{5}$ cup of sugar to make his cake. Nadia uses $2\frac{1}{2}$ cups of sugar to make her cake.
- How many cups of sugar do Bruno and Nadia use altogether?
- A $\frac{3}{7}$ cup
- B $\frac{9}{10}$ cup
- C $2\frac{3}{7}$ cups
- D $2\frac{9}{10}$ cups



4. Which pair of parentheses *could* be removed without changing the value of the expression?

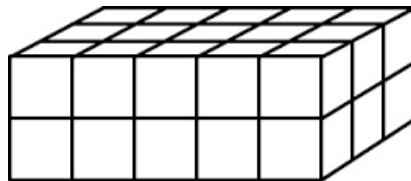
$$(3 \times 8) + 4(8 - 2) - (2 + 7 - 3)$$

- A parentheses (3×8)
 B parentheses $(8 - 2)$
 C parentheses $(2 + 7)$
 D parentheses $(7 - 3)$
5. Erin is packing up her daughter's toy blocks into a box. Each block has a volume of 1 cubic unit.



In order to fit all the blocks shown, what is the *minimum* volume of the box?

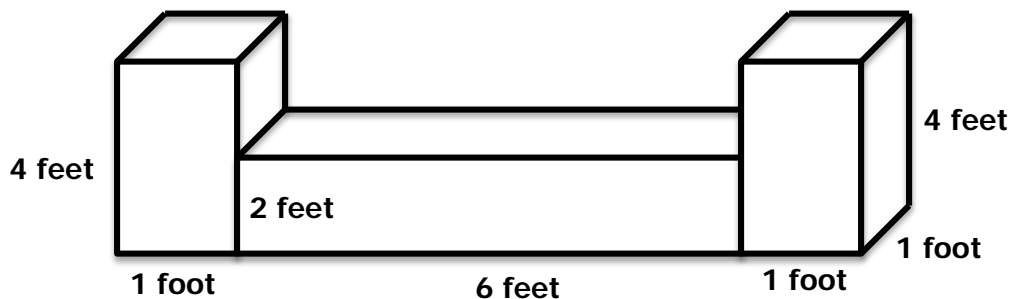
- A 3 units³
 B 6 units³
 C 7 units³
 D 12 units³
6. What is the volume of the rectangular prism, and why?



- A 30 cubic cm because $2 \text{ cm} \times 3 \text{ cm} \times 5 \text{ cm} = 30 \text{ cubic cm}$
 B 24 cubic cm because $2 \text{ cm} \times 3 \text{ cm} \times 4 \text{ cm} = 24 \text{ cubic cm}$
 C 20 cubic cm because $2 \text{ cm} \times 2 \text{ cm} \times 5 \text{ cm} = 20 \text{ cubic cm}$
 D 12 cubic cm because $2 \text{ cm} \times 2 \text{ cm} \times 3 \text{ cm} = 12 \text{ cubic cm}$

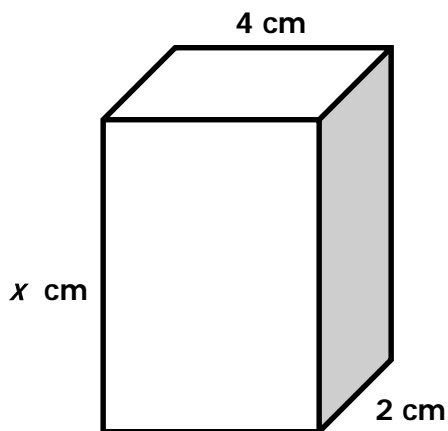


7. Lo Chin is building a bench out of concrete.



What volume of concrete will be needed to complete the bench?

- A 8 feet³
 - B 16 feet³
 - C 20 feet³
 - D 24 feet³
8. The volume of the rectangular prism is 48 cubic centimeters.



What is the value of x ?

- A 6 cm
- B 10 cm
- C 20 cm
- D 42 cm



9. A box of paper plates contains 542 plates. Sean purchases 18 boxes of paper plates. How many paper plates does Sean purchase?
- A 4,336 paper plates
B 4,878 paper plates
C 5,420 paper plates
D 9,756 paper plates
10. Stacie and Jamal both collect cards. If Stacie has twice as many cards as Jamal, and Jamal has 21 cards, which algebraic expression shows the total number of cards they have together?
- A $(21 + 21) \times 2$
B (21×2)
C $21 + 2 + 21$
D $(2 \times 21) + 21$
11. Which expression represents 63 minus the sum of 13 and 22?
- A $63 - (13 + 22)$
B $(63 - 13) + 22$
C $(63 - 13 + 22)$
D $63 - 13 + 22$



DIRECTIONS FOR THE GRIDDED RESPONSE SECTION OF THE TEST:

- Questions 1 through 7 require you to write your answers in the boxes provided on the back of your answer document.
- Write only the number or symbol in each box, and fill in the circle in each column that matches what you have printed.
- Fill in only 1 circle in each column.

1. What is the value of $3 \times 6[(15 - 8) + (4 + 18)] - 9$?

2. What is the sum of $\frac{1}{2}$ and $\frac{3}{8}$?

(Write the answer as a fraction in *lowest* terms.)

3. Mr. Connor has $8\frac{3}{4}$ pounds of candy. His teacher's assistant has $3\frac{7}{8}$ pounds of candy.

How much candy do Mr. Connor and his assistant have altogether?

(Write the answer as an improper fraction in *lowest* terms.)

4. What number should be subtracted from $\frac{4}{9}$ to get $\frac{5}{18}$?

(Write the answer as a fraction in *lowest* terms.)



5. A ticket for a round-trip vacation to New York from North Carolina costs \$215. A group of 25 people would like to go on this vacation.

What is the total cost for all 25 people to go on this vacation?

6. A florist has 835 dozen roses. How many roses does the florist have?

7. What is the value of the expression $(90 - 48) \div 6 + 2$?



END OF CALCULATOR INACTIVE SECTION

DIRECTIONS:

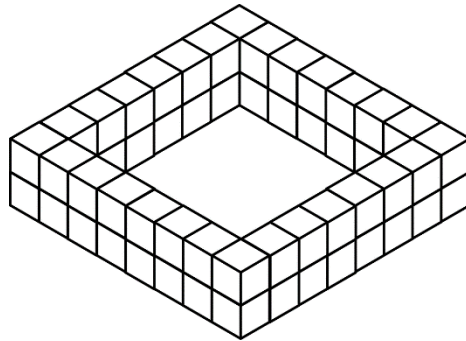
- Look back over your answers for the calculator inactive questions. You will not be able to go back and work on these questions once you are given a calculator.
- Raise your hand to let your teacher know you are ready to begin the calculator active questions.
- Do not begin work on the calculator active test questions until your teacher has given you a calculator.
- Turn your answer document over to the multiple choice side.
- When your teacher has given you a calculator, **GO TO THE NEXT PAGE**, and **BEGIN** the calculator active questions.



12. What is the difference between $\frac{7}{10}$ and $\frac{2}{5}$?

- A $\frac{3}{10}$
- B $\frac{5}{10}$
- C $\frac{5}{5}$
- D $\frac{12}{5}$

13. In the figure shown, each cube measures 1 cubic centimeter.



What is the volume of the empty space inside the walls of the figure?

- A 36 cm^3
- B 56 cm^3
- C 72 cm^3
- D 128 cm^3

14. Which equation can be simplified to find the quotient of $3,880 \div 20$?

- A $(3,000 \div 20) + (800 \div 20) + (80 \div 20) = 194$
- B $(3,000 \div 20) + (800 \div 10) + (80 \div 5) = 194$
- C $(38 \div 20) + (80 \div 20) = 194$
- D $(38 \div 20) + (80 \div 10) = 194$



15. Scott is building a new compost bin. The base of the bin is 4 feet long by 5 feet wide. How tall, in feet, must Scott make the new compost bin so that the volume is *exactly* 100 cubic feet?
- A 4 feet
 - B 5 feet
 - C 11 feet
 - D 20 feet
16. A moving company offers two sizes of moving trucks. Truck G can fit 20 boxes that measure 1 cubic yard. Truck H is twice as large. What is the volume of Truck H?
- A 10 yards³
 - B 20 yards³
 - C 40 yards³
 - D 80 yards³
17. Allison creates a circular vegetable garden. Tomatoes are planted in $\frac{1}{3}$ of the circular garden, carrots are planted in $\frac{2}{5}$ of the circular garden, and green peppers are planted in $\frac{1}{10}$ of the circular garden. What fraction represents the remaining unplanted space of the circular garden?
- A $\frac{1}{6}$ garden
 - B $\frac{4}{18}$ garden
 - C $\frac{14}{18}$ garden
 - D $\frac{5}{6}$ garden



18. How is $4 \times (1,200 + 350)$ written as a verbal description?

- A The sum of 4 and 1,200 is increased by 350.
- B The sum of 1,200 and 350 is multiplied by 4.
- C The product of 4 and 1,200 is increased by 350.
- D The product of 1,200 and 350 is increased by 4.

19. Lionel has sets of cement blocks (E , F , G , and H) with dimensions as shown in the table.

| Set Name | Length (in feet) | Width (in feet) | Height (in feet) |
|----------|------------------|-----------------|------------------|
| E | 2 | 4 | 3 |
| F | 3 | 12 | 9 |
| G | 6 | 2 | 2 |
| H | 6 | 4 | 1 |

Which set of cement blocks will not result in a volume of 24 cubic feet?

- A Set E
- B Set F
- C Set G
- D Set H

20. A Rubik's Cube is a game where the person tries to get each surface of a cube to be one color. The Rubik's Cube is made up of smaller unit cubes stacked together.



What is the volume of the Rubik's Cube?

- A 6 units³
- B 9 units³
- C 18 units³
- D 27 units³



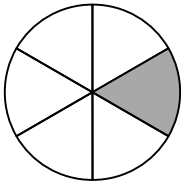
21. Which expression has the *greatest* value?

- A $2 \times 10 - 4$
- B $[100 - 20] \div 5$
- C $3 \times [(8 - 1)10]$
- D $7 + 2 \times (60 - 40)$

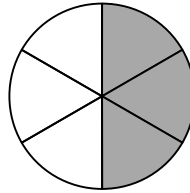
22. Sarah eats $\frac{1}{6}$ pie for dinner. The next day her dad eats a piece of the pie. After her dad eats a piece, there is $\frac{1}{3}$ pie remaining. Sarah shades in a diagram to represent her dad's piece of pie.

Which diagram represents Sarah's dad's piece of pie?

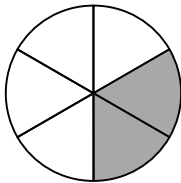
A



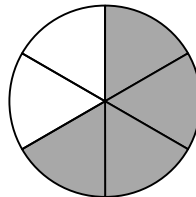
C



B



D

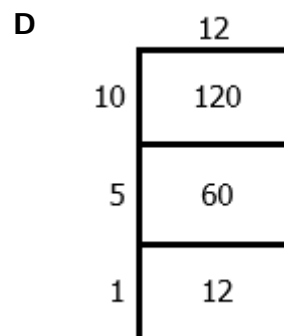
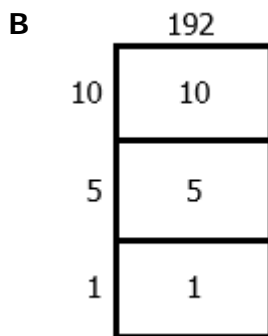
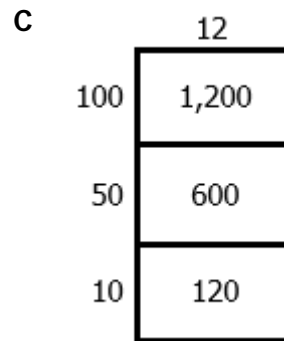
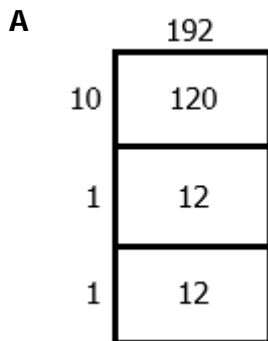


23. Which equation can be used to find the quotient (r) of $9,906 \div 13$?

- A $13 - r = 9,906$
- B $13 + r = 9,906$
- C $13 \times r = 9,906$
- D $13 \div r = 9,906$



24. Carlos wants to draw an area model to represent the division expression $192 \div 12$. Which area model *correctly* represents Carlos' expression?



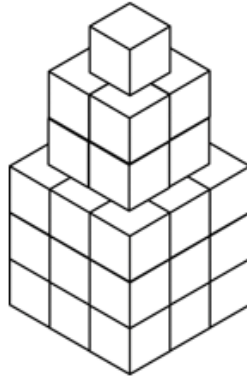
25. Which statement about the number sentence in the box is correct?

$$8 \times (100 - 98) \geq 100 - 98$$

- A** The number sentence is true because $8 \times (100 - 98)$ means 8 times as large.
- B** The number sentence is true because 702 is larger than 2.
- C** The number sentence is false because $8 \times (100 - 98)$ means 8 times as small.
- D** The number sentence is false because 702 is smaller than 2.



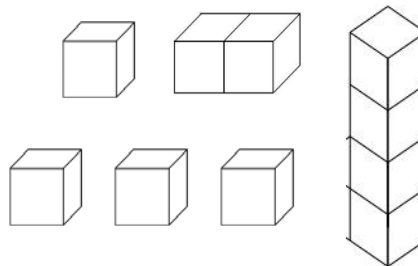
26. Each cube represents 1 cubic foot.



What is the volume of the figure?

- A 14 cubic feet
- B 22 cubic feet
- C 27 cubic feet
- D 36 cubic feet

27. Maria is arranging unit cubes. She stacks all of the cubes to make a solid figure with no gaps.



What is the volume of the figure Maria creates?

- A 4 units³
- B 6 units³
- C 9 units³
- D 10 units³



28. Study the two figures shown.

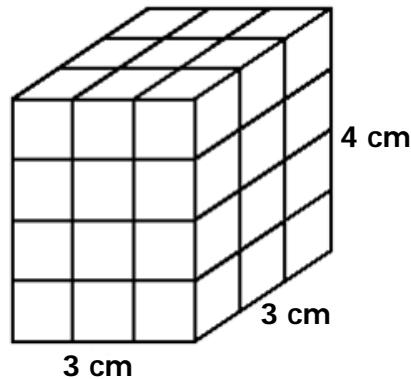


Figure X

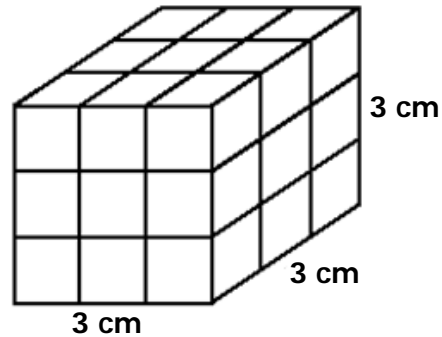


Figure Y

What is the difference in volume between Figure X and Figure Y?

- A Figure X has a larger volume than Figure Y.
- B Figure Y has a larger volume than Figure X.
- C The volumes of Figure X and Figure Y are equal.
- D The volumes of Figure X and Figure Y cannot be determined.



END OF MATH TEST

DIRECTIONS:

- Put all your papers inside your test booklet, and close your test booklet.
- Place your calculator on top of the test booklet.
- Stay quietly in your seat until your teacher tells you that testing has finished.

