

STUDENT NAME: \_\_\_\_\_

STUDENT SCORE: \_\_\_\_\_



**MISSISSIPPI ASSESSMENT PROGRAM (MAP)  
MATHEMATICS  
PRACTICE TESTLET  
GRADE 5  
(REVISED MARCH 2016)**

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**Carey M. Wright, Ed.D., State Superintendent of Education**

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A Joint Publication

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## **Introduction**

### **Purpose**

The practice testlet is designed to provide students with an authentic opportunity to practice items that are aligned to the Mississippi College-and Career-Readiness Standards (MS CCRS) and that mirror those that may appear on the mathematics MAP assessment. The testlet is also intended to provide teachers with data to drive classroom instruction and provide direct feedback to students. It is **NOT** intended to predict student performance on the operational MAP Assessment.

### **Structure**

The mathematics testlet contains various item types that will be administered on the MAP assessment, such as standard multiple choice, matching, multiple select, and fill in the blank. At the end of the testlet are a series of performance task items, which will assess the performance task standards found in the mathematics MAP blueprint.

### **Directions**

1. Allow students to complete each item type and performance task in the testlet.
2. Teachers will review student responses to the items and score the items and the performance task using the scoring key.
3. Teachers should review the results to determine the needed instructional approach.
4. Teachers can utilize the testlets as teaching tools to help students gain a deeper understanding of the MS CCRS.
5. At the bottom left of each page is an item tag, which will contain the item number, grade level, suggested DOK level, and the standard aligned to the item.

1. The football team has a 25-gallon cooler filled with water for each practice. There are 35 players on the team. Which fraction represents the amount of water, in gallons, each player receives if the water is shared equally among them?

A.  $\frac{35}{25}$  gallons

B.  $\frac{25}{35}$  gallons

C.  $\frac{29}{25}$  gallons

D.  $\frac{7}{5}$  gallons

01-GR5-LV2-5.NF.3

2. Directions: Evaluate the expression  $6 + 30 \div 3 \times (5 - 2)$ .

A. 58

B. 14

C. 36

D. 48

02-GR5-LV2-5.OA.1

3. Which statement describes the relationship between the value of 4 in the number 5,347,129 and the value of 4 in the number 4,823,165?
- A. In the number 5,347,129, the value of 4 is  $\frac{1}{10}$  the value of 4 in the number 4,823,165.
- B. In the number 5,347,129, the value of 4 is  $\frac{1}{100}$  the value of 4 in the number 4,823,165.
- C. In the number 5,347,129, the value of 4 is 10 times the value of 4 in the number 4,823,165.
- D. In the number 5,347,129, the value of 4 is 100 times the value of 4 in the number 4,823,165.

03-GR5-LV1-5.NBT.1

4. Directions: Select four different ways that you can rewrite the decimal 2.84.

A. Two and eighty-four hundredths

B. Two and eighty-four tenths

C.  $2 + \frac{8}{10} + \frac{4}{100}$

D.  $2(1) + 8(0.1) + 4(0.01)$

E. 284 hundredths

04-GR5-LV1-5.NBT.3a

5. The table below shows the race time, in seconds, for the top five swimmers in the championship round.

Swimmer	Race Time (Seconds)
Micah	55.77
Ralph	54.29
Keon	52.02
Steve	54.78
Wen	52.55

Each swimmer's time is rounded to the nearest whole number to determine his placing.

Directions: Show each swimmer's placing by selecting the correct bubble in each row.

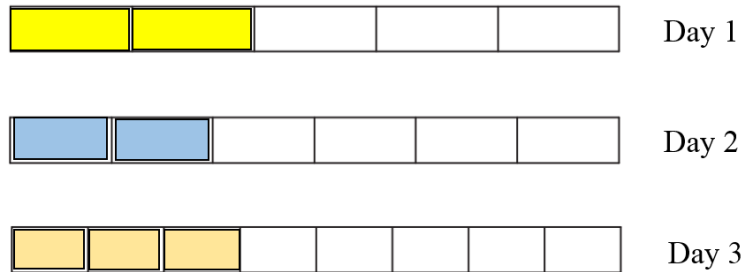
	1 <sup>st</sup> Place	2 <sup>nd</sup> Place	3 <sup>rd</sup> Place	4 <sup>th</sup> Place	5 <sup>th</sup> Place
Micah	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ralph	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Keon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Steve	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

05-GR5-LV2-5.NBT.4



6. The model below represents the amount of time, in hours, Kaylee spent sleeping each of the last three days.

*Note: 1 day = 24 hours*



Directions: Calculate the total amount of time, in hours, Kaylee spent sleeping the last three days.

- A. 30.9 hours
- B. 30 hours
- C. 21 hours
- D. 26.6 hours

06-GR5-LV2-5.NF.4a

7. Which statement below best explains how to evaluate the expression  $\frac{14}{15} - \frac{2}{3}$ ?
- A. Subtract the numerators first then subtract the denominators.
  - B. Write an equivalent fraction for  $\frac{14}{15}$  with 3 as the new denominator. Then subtract the numerators and the denominators separately.
  - C. Write equivalent fractions for both fractions where 45 is the denominator. Then subtract the numerators and the denominators separately.
  - D. Write an equivalent fraction for  $\frac{2}{3}$  with 15 as the new denominator. Then subtract only the numerators.

07-GR5-LV2-5.NF.1

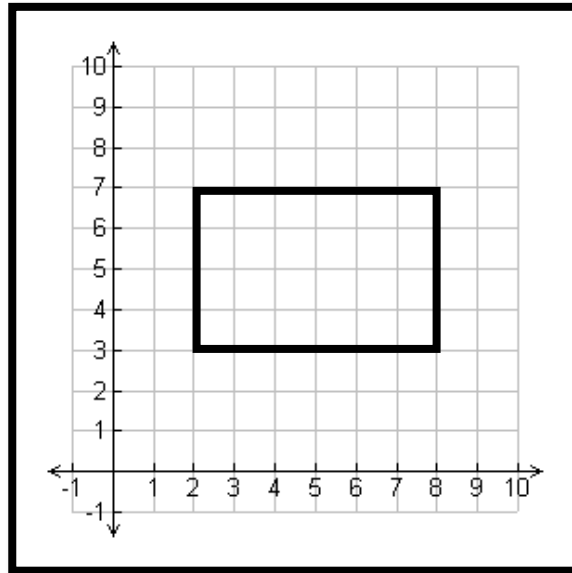
8. A college football stadium has 12,084 seats. There are 19 sections in the stadium with the same number of seats in each section.

Directions: For each equation, determine whether or not it can be used to find the number of seats,  $s$ , in each section of the stadium. Select one bubble in each row.

Equation	Yes	No
$12,084s = 19$	<input type="radio"/>	<input type="radio"/>
$19s = 12,084$	<input type="radio"/>	<input type="radio"/>
$s \div 19 = 12,084$	<input type="radio"/>	<input type="radio"/>
$12,084 \div 19 = s$	<input type="radio"/>	<input type="radio"/>

08-GR5-LV1-5.NBT.6

9. Yolanda drew a rectangle on the coordinate grid below to represent the shape of her new swimming pool.



Which ordered pair represents a point inside Yolanda's swimming pool?

- A. (4,5)
- B. (5,3)
- C. (7,8)
- D. (2,8)

09-GR5-LV1-5.G.2

10. Which statement below best describes how to simplify the expression  $4.25 \div 0.75$ ?
- A. Add 0.25 to the dividend and divisor and then divide.
  - B. Multiply both the dividend and the divisor by 10 and then divide like you would if you had whole numbers.
  - C. Multiply both the dividend and the divisor by 100 and then divide like you would if you had whole numbers.
  - D. Multiply the dividend by 10, multiply the divisor by 100, and then divide like you would if you had whole numbers.

10-GR5-LV2-5.NBT.7

11. Directions: Determine whether each statement listed in the table is always true, sometimes true, or never true. Select one bubble in each row.

<b>Statement</b>	<b>Always True</b>	<b>Sometimes True</b>	<b>Never True</b>
A square is a rhombus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A square is a rectangle.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A square is a parallelogram.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A parallelogram is a rectangle.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A triangle is a kite.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A trapezoid is a quadrilateral.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11-GR5-LV2-5.G.3

12. Directions: Consider the following expressions.

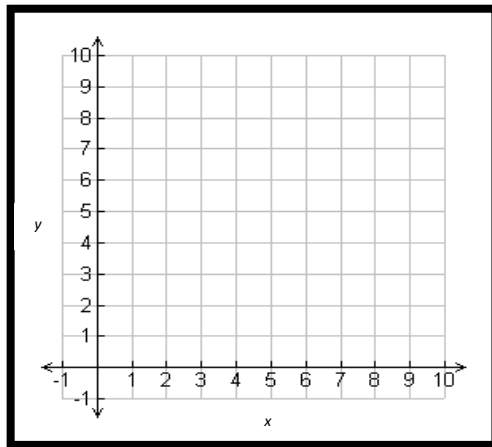
$$\frac{5}{6} \times \frac{1}{4} \text{ and } \frac{5}{6} \times \frac{8}{2}$$

Which two statements listed below best describe the products above?

- A. The product of  $\frac{5}{6} \times \frac{1}{4}$  will be greater than the fraction  $\frac{5}{6}$ .
- B. The product of  $\frac{5}{6} \times \frac{1}{4}$  will be less than the fraction  $\frac{5}{6}$ .
- C. The product of  $\frac{5}{6} \times \frac{8}{2}$  will be greater than the fraction  $\frac{5}{6}$ .
- D. The product of  $\frac{5}{6} \times \frac{8}{2}$  will be less than the fraction  $\frac{5}{6}$ .
- E. The two products will be equal because each fraction is greater than zero.

12-GR5-LV2-5.NF.5b

13. Directions: Select the four statements that are true about the coordinate grid below.



- A. The ordered pair  $(0,0)$  is also called the origin.
- B. The x-axis shows the distance to the right of the y-axis where a point is located.
- C. The ordered pair  $(3,2)$  names a point 2 units to the right of 0 and 3 units above the x-axis.
- D. The y-axis shows the distance above the x-axis where a point is located.
- E. The x-axis and y-axis intersect and form perpendicular lines.

13-GR5-LV1-5.G.1



14. Which two expressions can be used to model the statement below?

Statement:

*Add four and six, then multiply the sum by eight.  
Divide the product by two, then triple the quotient.*

A.  $3(4 + 6 \times 8 \div 2)$

B.  $8(4 + 6) \div (8 \times 3)$

C.  $(4 + 6) \div (8 \times 2 \times 3)$

D.  $8(4 + 6) \times \frac{1}{2} \times 3$

E.  $8(4 + 6) \div 2 \times 3$

14-GR5-LV2-5.OA.2

15. Atticus has  $4\frac{3}{5}$  cups of flour. Kimmie needs to use  $2\frac{2}{3}$  cups of flour from Atticus to make cookies. How much flour will Atticus have left over once he gives Kimmie what she needs to make her cookies?

A.  $2\frac{1}{2}$  cups

B.  $2\frac{5}{8}$  cups

C.  $2\frac{1}{15}$  cups

D.  $1\frac{14}{15}$  cups

15-GR5-LV2-5.NF.1

16. Carmela multiplied the numbers 245 and 123. Her work is shown below.

$$\begin{array}{r} \phantom{+} \\ \phantom{++} \\ 245 \\ \times 123 \\ \hline 735 \quad \leftarrow \text{Step 1} \\ 4900 \quad \leftarrow \text{Step 2} \\ 24500 \quad \leftarrow \text{Step 3} \\ \hline 28,135 \quad \leftarrow \text{Step 4} \end{array}$$

Directions: Which step shows where Carmela made her first mistake?

- A. Step 1
- B. Step 2
- C. Step 3
- D. Step 4

16-GR5-LV2-5.NBT.5

17. Cruz loves to jump rope. He wants to beat the current record holder, Joey Motsay, who holds the Guinness World Record for the longest time jumping rope without taking a break.

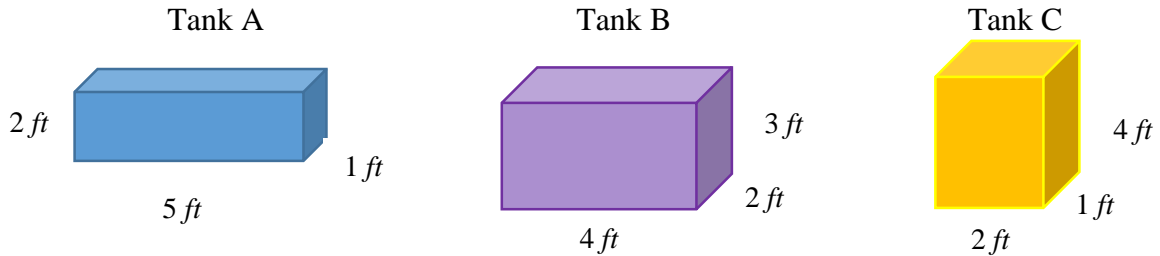
Joey Motsay set the record by jumping rope during a marathon session that lasted 120,000 seconds. Cruz was only able to jump rope for 29,700 seconds. How many minutes did Cruz spend jumping rope?

- A. 505 minutes
- B. 495 minutes
- C. 2,000 minutes
- D. 2,013 minutes

17-GR5-LV2-5.MD.1

18. Natalie needs to buy a new fish tank for her goldfish collection. The local fish store has three of their most popular fish tanks on sale. The dimensions of each fish tank are shown below.

Figures not drawn to scale.



Directions: Select one bubble in each row that represents the volume of each fish tank.

Tank	$8 \text{ ft}^3$	$10 \text{ ft}^3$	$24 \text{ ft}^3$
Tank A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tank B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tank C	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18-GR5-LV2-5.MD.5b

19. Four friends measure the width of the sidewalk in front of their own homes. The width of the sidewalk in front of each of their homes is recorded in the table below. Maddie claims that her sidewalk is the widest because 2,438 is the largest number. Sabra and the others disagree with Maddie.

Name	Width
Sabra	12.2 decimeters
Alex	3.6 meters
Taj	182.8 centimeters
Maddie	2,438 millimeters

Directions: Solve the argument by determining who has the sidewalk with the greatest width.

- A. Sabra
- B. Alex
- C. Taj
- D. Maddie

19-GR5-LV2-5.MD.1

20. The fraction  $\frac{5}{16}$  is added separately to each fraction in the table below.

Directions: Determine whether the sum would lie on a number line between 0 and 1.  
Select one bubble in each row.

	Yes	No
$\frac{1}{8}$	<input type="radio"/>	<input type="radio"/>
$\frac{7}{8}$	<input type="radio"/>	<input type="radio"/>
$\frac{1}{2}$	<input type="radio"/>	<input type="radio"/>
$\frac{1}{4}$	<input type="radio"/>	<input type="radio"/>
$\frac{5}{8}$	<input type="radio"/>	<input type="radio"/>

20-GR5-LV2-5.NF.1

21. A rectangular prism has a length of seven inches, a width of three inches, and a height of four inches. The rectangular prism will be filled with cubes that measure one inch on each side. Which situation described below can be used to model the volume of the rectangular prism?
- A. Place 4 rows of 7 one-inch cubes on the bottom of the rectangular prism first and then 3 more such layers on top of the bottom layer.
  - B. Place 7 rows of 4 one-inch cubes on the bottom of the rectangular prism.
  - C. Place 7 one-inch cubes in one row, 4 one-inch cubes in a second row, and 3 one-inch cubes in a third row inside the rectangular prism.
  - D. Place 7 rows of 3 one-inch cubes in 4 layers of the rectangular prism.

21-GR5-LV2-5.MD.5a



22. Which two statements describe a “strategy” that can be used to find the volume of the object being described in each statement below?
- A. Walk around the outside of a backyard that measures 150 feet  $\times$  80 feet.
  - B. Cover a wall that measures 12 feet  $\times$  15 feet with wallpaper.
  - C. Stack unit cubes to fill the inside of a shoe box.
  - D. Cover the top of a cube-shaped box with a lid.
  - E. Place unit cubes inside of a shipping box until the box is completely full.

22-GR5-LV1-5.MD.3a

23. Directions: Select one bubble in each row that shows the relationship between the two decimal values in the table.

<b>Decimal Values</b>	<b>&lt;</b>	<b>&gt;</b>
7.045 <input type="checkbox"/> 7.41	<input type="radio"/>	<input type="radio"/>
0.082 <input type="checkbox"/> 0.08	<input type="radio"/>	<input type="radio"/>
1.101 <input type="checkbox"/> 1.110	<input type="radio"/>	<input type="radio"/>
0.591 <input type="checkbox"/> 0.519	<input type="radio"/>	<input type="radio"/>
0.283 <input type="checkbox"/> 0.493	<input type="radio"/>	<input type="radio"/>

23-GR5-LV1-5.NBT.3b

24. JaMicheal sets a daily goal to ride his bike  $8\frac{3}{4}$  miles. Today he rode his bike  $\frac{4}{5}$  of his daily goal. How many miles did he ride his bike today?

A. 7 miles

B.  $7\frac{19}{20}$  miles

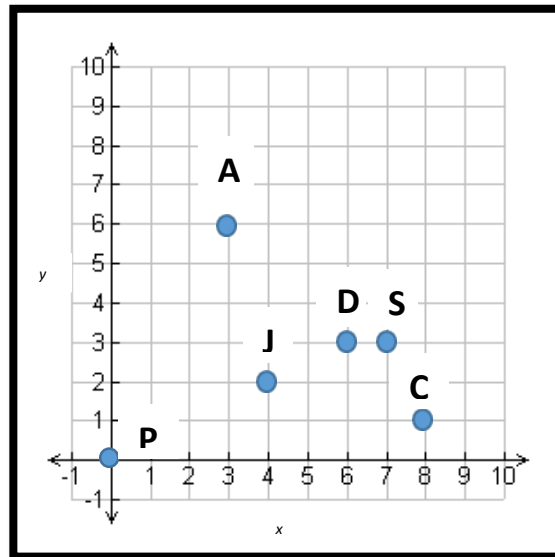
C.  $1\frac{3}{4}$  miles

D.  $1\frac{4}{5}$  miles

24-GR5-LV2-5.NF.6

25. Pedro uses a coordinate grid to model where his friends live in relationship to his house, at point  $P$ .

Directions: Determine whether each statement is true or false. Select one bubble in each row.



	True	False
Pedro's house, <b>P</b> , is located at the origin.	<input type="radio"/>	<input type="radio"/>
Charlie's house, <b>C</b> , is located at the point (1,8).	<input type="radio"/>	<input type="radio"/>
Amie's house, <b>A</b> , is located at the point (3,6).	<input type="radio"/>	<input type="radio"/>
Jamee's house, <b>J</b> , is located at the point (2,4).	<input type="radio"/>	<input type="radio"/>
Salvatore's house, <b>S</b> , is located at the point (7,3).	<input type="radio"/>	<input type="radio"/>

25-GR5-LV1-5.G.2

26. Which number listed below is equivalent to  $6 \times 10^0 + 1 \times 10^2 + 7 \times 10^1 + 4 \times 10^3$ ?

A. 4,176

B. 6,174

C. 7,146

D. 6,714

26-GR5-LV2-5.NBT.2

27. Directions: Select one bubble in each row that shows whether the sum of the two fractions shown is less than  $\frac{1}{2}$  or greater than  $\frac{1}{2}$ .

	$< \frac{1}{2}$	$> \frac{1}{2}$
$\frac{2}{5} + \frac{1}{6}$	<input type="radio"/>	<input type="radio"/>
$\frac{2}{7} + \frac{1}{6}$	<input type="radio"/>	<input type="radio"/>
$\frac{1}{3} + \frac{2}{5}$	<input type="radio"/>	<input type="radio"/>

27-GR5-LV2-5.NF.2

28. Nigel wrote the first six terms of two number patterns below.

Pattern A: 1, 2, 3, 4, 5, 6, .....

Pattern B: 5, 10, 15, 20, 25, 30, .....

Which of the following statements is true about Pattern A and Pattern B?

- A. The 5<sup>th</sup>, 8<sup>th</sup>, and 10<sup>th</sup> term in Pattern A will be 5 times the 5<sup>th</sup>, 8<sup>th</sup>, and 10<sup>th</sup> term in Pattern B.
- B. The 5<sup>th</sup>, 8<sup>th</sup>, and 10<sup>th</sup> term in Pattern A will be 5 more than the 5<sup>th</sup>, 8<sup>th</sup>, and 10<sup>th</sup> term in Pattern B.
- C. The 5<sup>th</sup>, 8<sup>th</sup>, and 10<sup>th</sup> term in Pattern B will be 5 times the 5<sup>th</sup>, 8<sup>th</sup>, and 10<sup>th</sup> term in Pattern A.
- D. The 5<sup>th</sup>, 8<sup>th</sup>, and 10<sup>th</sup> term in Pattern B will be 5 more than the 5<sup>th</sup>, 8<sup>th</sup>, and 10<sup>th</sup> term in Pattern A.

28-GR5-LV2-5.OA.3

29. Determine which three situations could represent the fraction  $\frac{2}{3}$  or an equivalent fraction.

- A. Sara walked 4 out of 9 miles.
- B. Mark shared a candy bar that had 6 pieces between 9 of his friends.
- C. Marty ate 2 of the 3 cookies.
- D. Eight sandwiches are shared between 12 friends.
- E. Beth misspelled 3 of the 9 vocabulary words on her spelling test yesterday.

29-GR5-LV2-5.NF.3

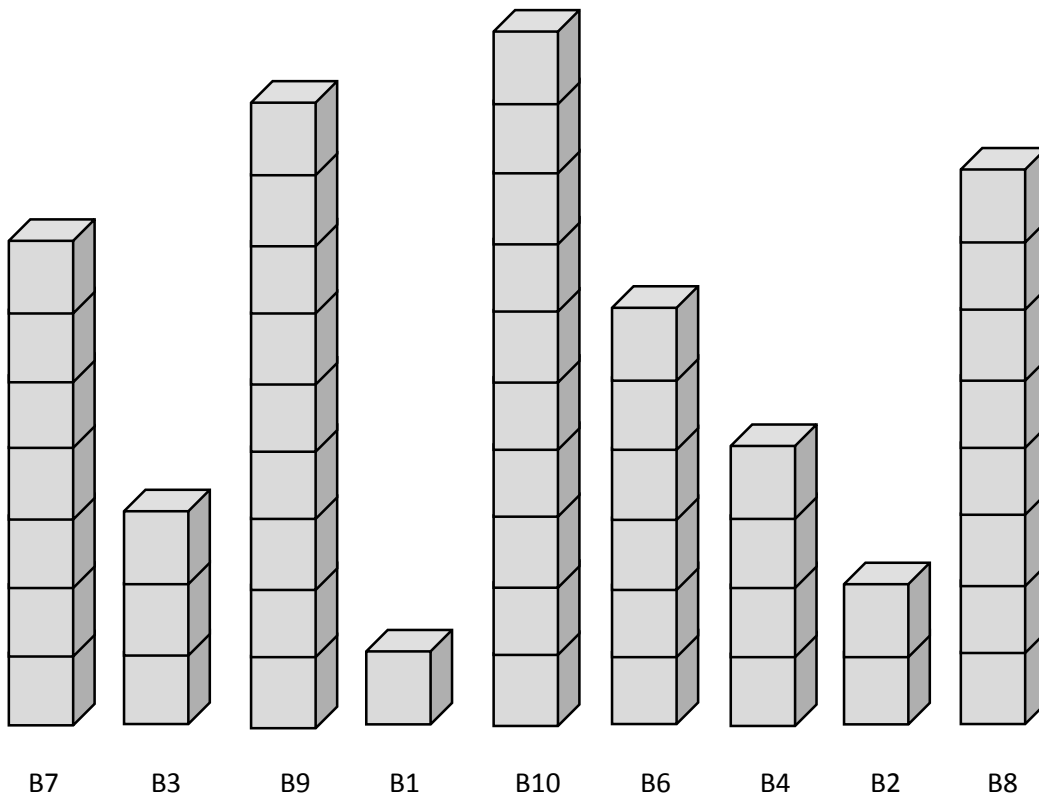


## Grade 5 Performance Task:

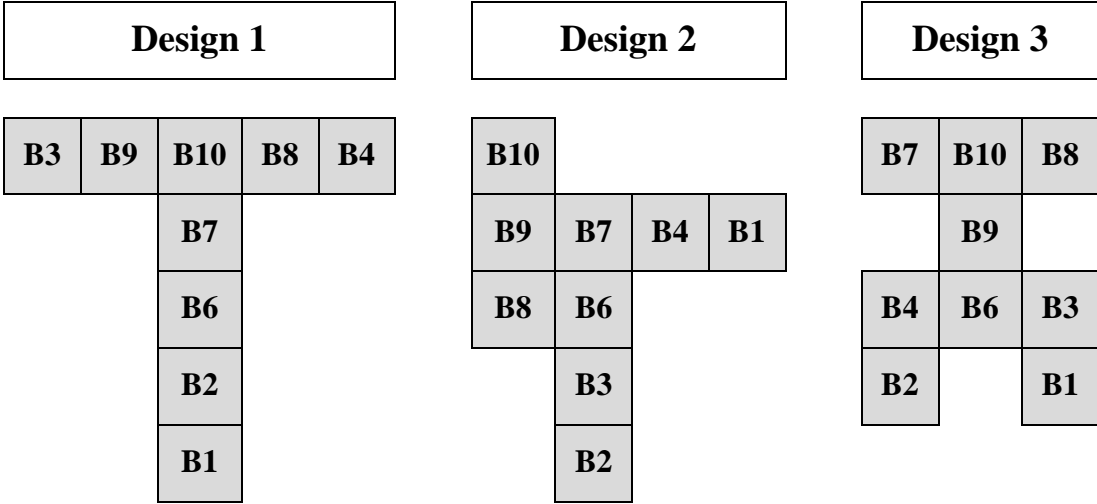
Directions: Use the following information to answer items 30-34.

The picture shown below represents a model of several new buildings that will be constructed in the city. Each building is modeled by a set amount of cubes. Each cube represents a story or “floor” of the building and has a length of 12 feet, a width of 12 feet, and a height of 12 feet.

Each building has been named based on the number of stories (or floors) it will have. For example, building “B1” will have 1 story, building “B2” will have 2 stories, building “B3” will have 3 stories, and so on. Out of tradition, the city cannot have any five story buildings.



30. Mr. Jones is a city planner. He must arrange the buildings to fit in an area that measures 17 yards  $\times$  17 yards. The three designs below represent an overhead view of how he might arrange the buildings. The top of each building has been labeled with its name for convenience.



Which design will fit in the area that Mr. Jones must use? \_\_\_\_\_

31. For his next project, Mr. Jones decides to put B1, B2, B3, B4, and B9 next to each other in a small group. Help Mr. Jones calculate the “volume” of each building. Record your answers in the table below.

Building	Volume of the Building (in cubic feet)
B1	
B2	
B3	
B4	
B9	

30-GR5-LV2-5.NBT.5 and 5.MD.1  
 31-GR5-LV2-5.MD.5c

32. Calculate the total volume, in cubic feet, of the small group of buildings in item #31.
33. Mr. Jones continues to change his design and decides to remove B1 and B9 from the small group. How does this affect the total volume of the small group of buildings? Record your answer in cubic feet.
34. After removing B1 and B9 from the group of buildings, Mr. Jones decides to do one final change by increasing B2 and B3 by 5 stories each. How does this affect the total volume of the small group of buildings? Record your answer in cubic feet.

32-GR5-LV2-5.MD.1

33-GR5-LV2-5.MD.5c

34-GR5-LV2-5.MD.5c

### Grade 5 Answer Key

Item	Answer	Standard	Point Value
1	B	5.NF.3	1 pt
2	C	5.OA.1	1 pt
3	B	5.NBT.1	1 pt
4	A, C, D, E	5.NBT.3a	2 pts
5	A5, B3, C1, D4, E2	5.NBT.4	2 pts
6	D	5.NF.4a	1 pt
7	D	5.NF.1	1 pt
8	A2, B1, C2, D1	5.NBT.6	2 pts
9	A	5.G.2	1 pt
10	C	5.NBT.7	1 pt
11	A1, B1, C1, D2, E3, F1	5.G.3	2 pts
12	B, C	5.NF.5b	1 pt
13	A, B, D, E	5.G.1	1 pt
14	D, E	5.OA.2	1 pt
15	D	5.NF.1	1 pt
16	D	5.NBT.5	1 pt
17	B	5.MD.1	1 pt
18	A2, B3, C1	5.MD.5b	1 pt
19	B	5.MD.1	1 pt
20	A1, B2, C1, D1, E1	5.NF.1	2 pts
21	D	5.MD.5a	1 pt
22	C, E	5.MD.3a	1 pt
23	A1, B2, C1, D2, E1	5.NBT.3b	2 pts
24	A	5.NF.6	1 pt
25	A1, B2, C1, D2, E1	5.G.2	2 pts
26	A	5.NBT.2	1 pt
27	A2, B1, C2	5.NF.2	1 pt
28	C	5.OA.3	2 pts
29	B, C, D	5.NF.3	1 pt
30	Design 3	5.NBT.5	1 pt
31	B1: 1,728 B2: 3,456 B3: 5,184 B4: 6,912 B9: 15,552	5.MD.5c	3 pts
32	32,832 cubic feet	5.MD.1	1 pt
33	It decreases <b>by</b> 17,280 cubic feet or It decreases <b>to</b> 15,552 cubic feet	5.MD.5c	2 pts

<b>Item</b>	<b>Answer</b>	<b>Standard</b>	<b>Point Value</b>
34	It increases <b>by</b> 17,280 cubic feet or It increases <b>to</b> 32,832 cubic feet or It returns to the total volume of the original design	5.MD.5c	2 pts
<b>Total Points</b>			<b>46 pts</b>

### Scoring Rules

Step #1: Use the answer key to view the maximum point value for each item.

Step #2: Add the total number of points the student has earned, and divide by the total number of points possible.

Step #3: Determine if the student has earned at least 80% of the total points.