



Grade 6 Mathematics

Sample Test Items

1. Jamie is mixing 3 parts of red paint for every 2 parts of blue paint. Which statements are true about the ratios of paint?

Select **two** answer choices.

- Ⓐ The amount of blue paint is $\frac{2}{3}$ the amount of red paint.
- Ⓑ There are 2 parts of blue paint for every 5 parts of red paint.
- Ⓒ The amount of red paint is $\frac{5}{3}$ the amount of total paint mixture.
- Ⓓ The amount of total paint mixture is $\frac{3}{2}$ the amount of blue paint.
- Ⓔ There are 5 parts of total paint mixture for every 2 parts of blue paint.

- 2.** It takes Julio 6 hours to bake 5 cakes. At what rate are the cakes baked?

- Ⓐ $\frac{5}{6}$ cake per hour
- Ⓑ 1 cake per hour
- Ⓒ $\frac{6}{5}$ cakes per hour
- Ⓓ 11 cakes per hour

3. Which table displays equivalent ratios?

(A)

Input	Output
1	5
3	7
5	9

(B)

Input	Output
2	3
4	6
8	12

(C)

Input	Output
1	3
2	4
3	5

(D)

Input	Output
2	3
4	5
5	6

4. A field in the shape of a rectangle has an area of $\frac{1}{3}$ square mile. The length of the field is $\frac{2}{5}$ mile. What is the width of the field?

- Ⓐ $\frac{2}{15}$ mile
- Ⓑ $\frac{11}{15}$ mile
- Ⓒ $\frac{5}{6}$ mile
- Ⓓ $1\frac{1}{5}$ miles

5. What is the quotient of 38,304 and 42?

Ⓐ 807

Ⓑ 892

Ⓒ 912

Ⓓ 933

6. The following question has two parts. First, answer Part A. Then, answer Part B.

Part A

Casey and 5 friends went to the movies. They spent a total of \$52.50 buying tickets. The cost of each movie ticket is the same. How much did each movie ticket cost?

Write the answer in the box.

\$

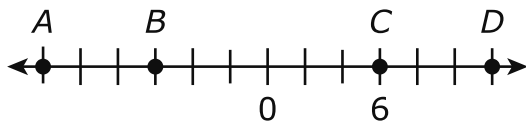
Part B

They each bought a popcorn and drink combo for \$5.25 each. How much did Casey and his friends spend altogether at the concession stand?

Write the answer in the box.

\$

7. Four different points are shown on the number line.



Which point represents -6 on the number line?

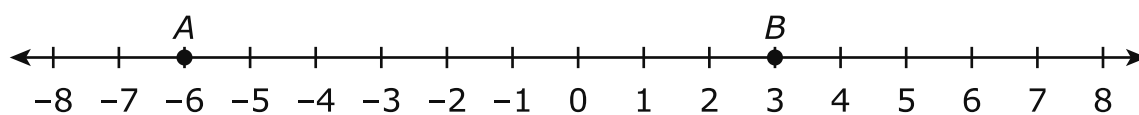
Ⓐ A

Ⓑ B

Ⓒ C

Ⓓ D

8. A number line is shown.



Which expression could be used to determine the distance between point A and point B ?

- Ⓐ $-6 - 3$
- Ⓑ $-6 + 3$
- Ⓒ $|-6 + 3|$
- Ⓓ $|-6 - 3|$

9. Hannah wrote an expression equivalent to 7^6 . Which expression could be Hannah's?

Ⓐ $6 + 6 + 6 + 6 + 6 + 6 + 6$

Ⓑ $6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 \cdot 6$

Ⓒ $7 + 7 + 7 + 7 + 7 + 7$

Ⓓ $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7$

10. Which expression matches the phrase “4 less than 3 times a number”?

Ⓐ $4 - 3n$

Ⓑ $3n - 4$

Ⓒ $4n - 3$

Ⓓ $3 - 4n$

11. Which expressions are equivalent to $8 + 2m$?

Select **two** answer choices.

Ⓐ $2(4 + m)$

Ⓑ $10m$

Ⓒ $8 + m^2$

Ⓓ $8 + m + m$

Ⓔ $4(2 + m)$

12. Which value of x makes $7x = 147$ true?

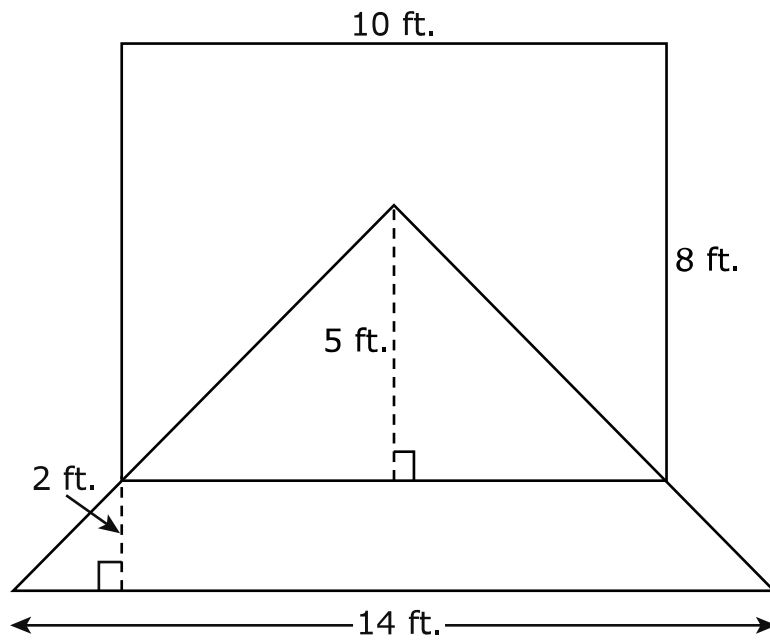
Ⓐ 11

Ⓑ 21

Ⓒ 140

Ⓓ 154

- 13.** An artist is painting a mural at the Hattiesburg Zoo. She draws a diagram of the mural before painting.



What is the total area of the mural?

Write the answer in the box.

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 ft.²

- 14.** The dimensions of a concrete basketball court are $31\frac{1}{3}$ yards by $16\frac{2}{3}$ yards. The thickness of the concrete pad is $\frac{1}{9}$ yard. What is the volume of the concrete pad?

Ⓐ $48\frac{1}{9} \text{ yd.}^3$

Ⓑ $58\frac{2}{81} \text{ yd.}^3$

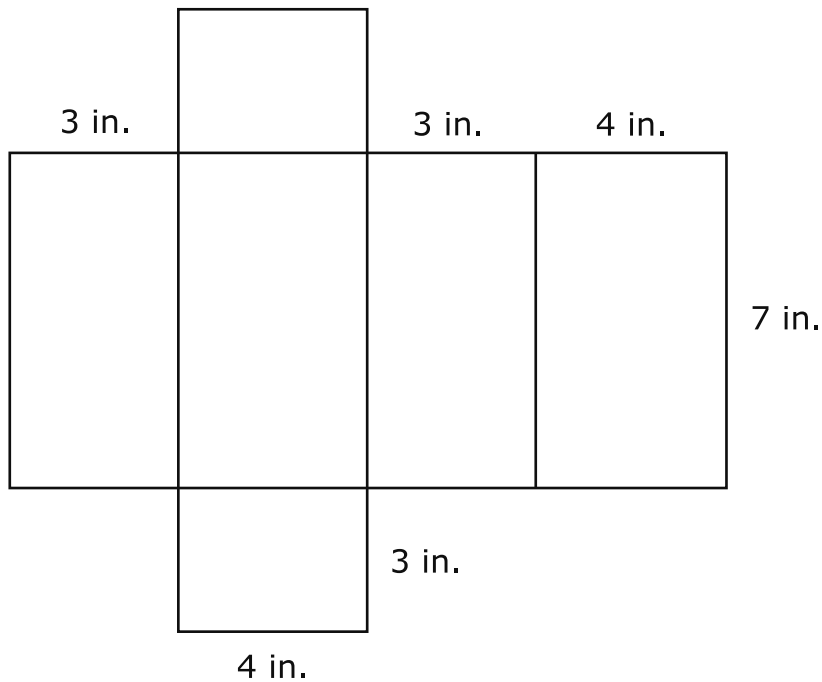
Ⓒ $497\frac{1}{9} \text{ yd.}^3$

Ⓓ $522\frac{2}{9} \text{ yd.}^3$

- 15.** A design for a triangular coffee table is drawn on a coordinate plane. One corner of the table is located at $(3, 13)$. A second corner is located at $(2, 3)$. The third corner of the table is 7 units to the right of the second corner. What are the coordinates of the third corner?

- Ⓐ $(2, 10)$
- Ⓑ $(3, 6)$
- Ⓒ $(9, 3)$
- Ⓓ $(10, 13)$

- 16.** Tiffany wants to wrap a gift that is in the shape of a rectangular prism. The gift has a length of 7 inches, a width of 4 inches, and a height of 3 inches. The net of the gift is shown.



What is the minimum amount of wrapping paper Tiffany needs to wrap the gift?

- Ⓐ 84 cubic inches
- Ⓑ 84 square inches
- Ⓒ 122 cubic inches
- Ⓓ 122 square inches

17. Which questions are statistical questions?

Select **two** answer choices.

- Ⓐ How old is my math teacher?
- Ⓑ How many feet are in three miles?
- Ⓒ What is each student's favorite dessert?
- Ⓓ In what state is the Statue of Liberty located?
- Ⓔ How many pets does each kid in my class have?

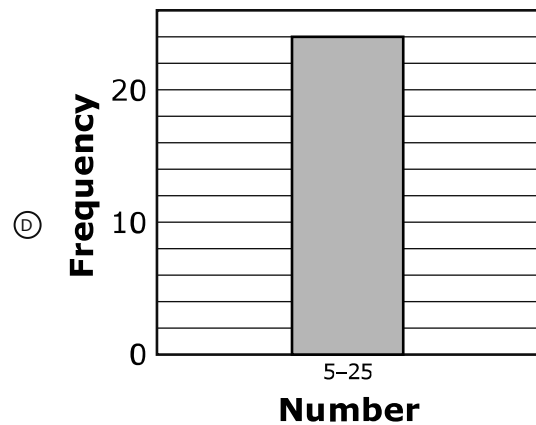
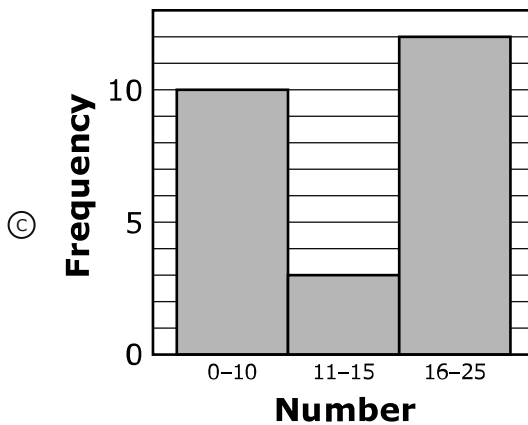
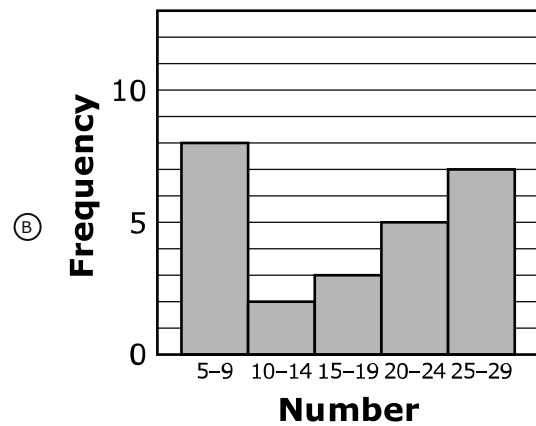
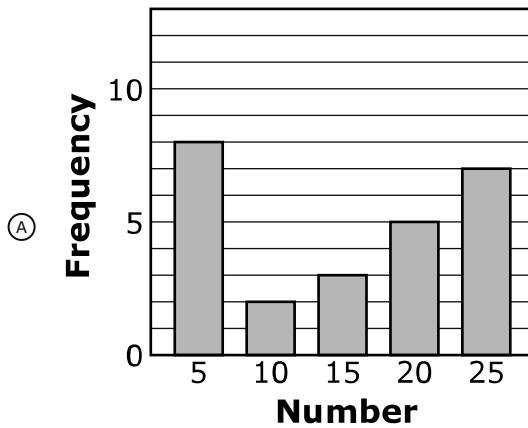
18. Which question could be answered using a measure of variability?

- Ⓐ How many boys are in the sixth grade?
- Ⓑ What is the average number of touchdowns scored during a football season?
- Ⓒ If the dance team lined up from shortest to tallest, who would be in the middle?
- Ⓓ What is the height difference between the shortest and tallest person in the room?

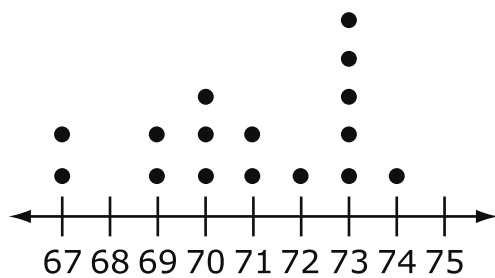
19. A frequency table is shown.

Number	5	10	15	20	25
Frequency	8	2	3	5	7

Which histogram accurately displays the data in the frequency table?



- 20.** The basketball team's scores for the last 16 games are shown in the dot plot.



How many times did the basketball team have a score in the 70s?

- Ⓐ 3
- Ⓑ 4
- Ⓒ 10
- Ⓓ 12

Grade 6 Math Sample Test Items
Paper-Pencil Answer Key Document

Sequence	Key	Standard	Possible Points
1	A,E	6.RP.1	1
2	A	6.RP.2	1
3	B	6.RP.3	1
4	C	6.NS.1	1
5	C	6.NS.2	1
6	8.75, 31.50	6.NS.3	2
7	B	6.NS.6	1
8	D	6.NS.9	1
9	D	6.EE.1	1
10	B	6.EE.2	1
11	A,D	6.EE.4	1
12	B	6.EE.5	1
13	104	6.G.1	1
14	B	6.G.2	1
15	C	6.G.3	1
16	D	6.G.4	1
17	C,E	6.SP.1	1
18	D	6.SP.3	1
19	B	6.SP.4	1
20	D	6.SP.5	1