



THIRD SPACE  
LEARNING

# 6th Grade Washington State Practice Math Test

Washington Practice Test  
Grade 6

Grade 6

Questions

Name: ..... Class: .....

Date: ..... Score: .....

- 1 A P.E. class has 38 red dodgeballs and 23 green dodgeballs. What is the ratio of green dodgeballs to total dodgeballs?
- A. 23:61
  - B. 38:23
  - C. 61:38
  - D. 23:38

- 2 What is the value of  $a$ ?



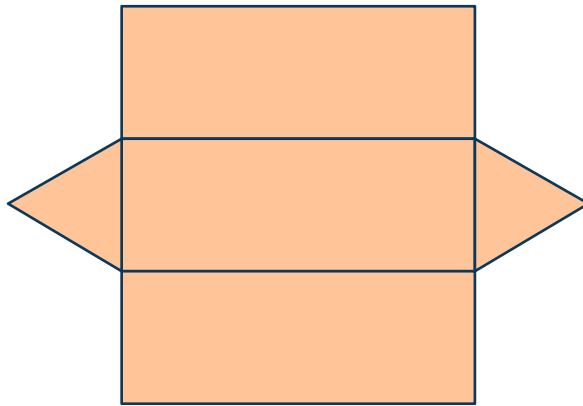
- A. -0.2
- B. -0.3
- C. -0.45
- D. -0.6

3 Which expression is equivalent to  $9x + 32$ ?

- A.  $9(x + 23)$
- B.  $7(x + 4) + 4$
- C.  $8(x + 4) + x$
- D.  $9(x + 4) + x$

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4



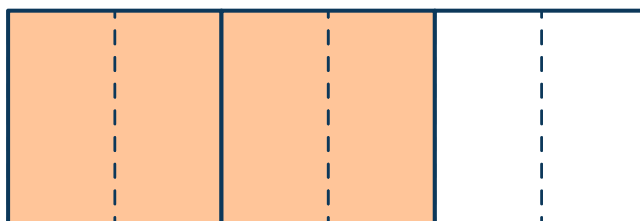
Which shape is formed by the net above?

- A. Triangular pyramid
- B. Triangular prism
- C. Square pyramid
- D. Isosceles triangle

- 5 Joshua makes 7 lanyards with 5 yards of fabric. How many yards of fabric does he need for 16 lanyards?

A. 35 yards of fabric  
 B.  $10\frac{1}{2}$  yards of fabric  
 C.  $11\frac{3}{7}$  yards of fabric  
 D.  $10\frac{3}{7}$  yards of fabric

- 6 Which expressions can be represented by the model? Select all the correct answers.



- a.  $\frac{2}{3} \div \frac{1}{6}$   
 b.  $\frac{4}{6} \div \frac{1}{3}$   
 c.  $\frac{1}{6} \div \frac{2}{3}$   
 d.  $\frac{1}{3} \div \frac{1}{6}$   
 e.  $\frac{1}{6} \div \frac{4}{6}$



- 7 Mrs. Sanders needs at least 12 more baked goods for the event on Friday. If  $b$  is the number of baked goods, which inequality shows how many Mrs. Sanders needs?

A.  $b \leq 12$   
B.  $b < 12$   
C.  $b > 12$   
D.  $b \geq 12$

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- 8 Below are the total scores for the first 5 games Tamera's softball team played.

Total score: 6, 7, 3, 5, 2.

What is the mean of the total scores?

A. 4.6  
B. 5  
C. 3  
D. 4.7

- 9 A jacket was on sale for 30% off. After the discount, Ben paid \$42 for the jacket. What was the original price of the jacket?

A. \$50  
B. \$55  
C. \$60  
D. \$70

- 
- 10 Solve  $400.41 \div 4.5$ .

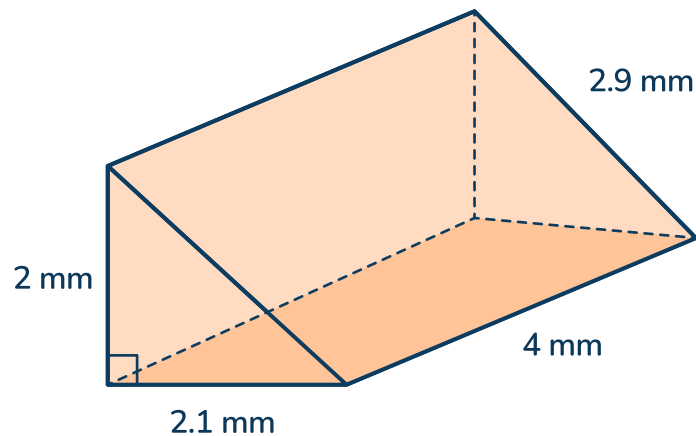
A. 87.8  
B. 88.98  
C. 88.716  
D. 89.4

11  $\frac{c}{5} = 12$

Which value for  $c$  makes the equation true?

- A. 3
- B.  $\frac{1}{3}$
- C. 20
- D. 60

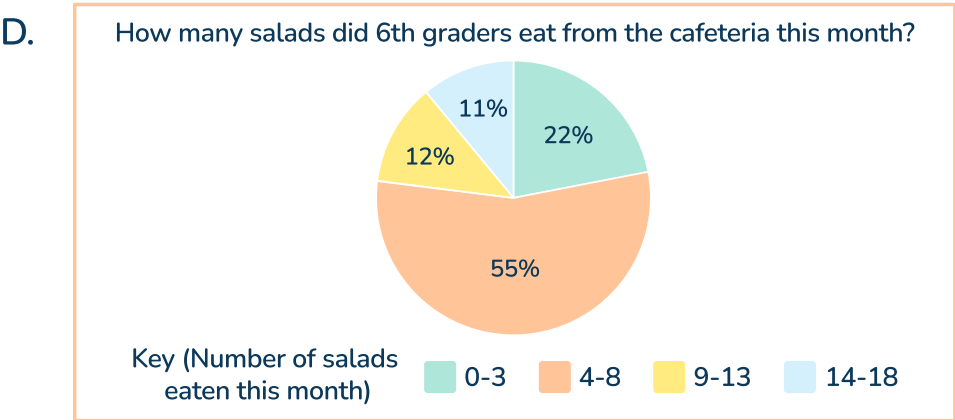
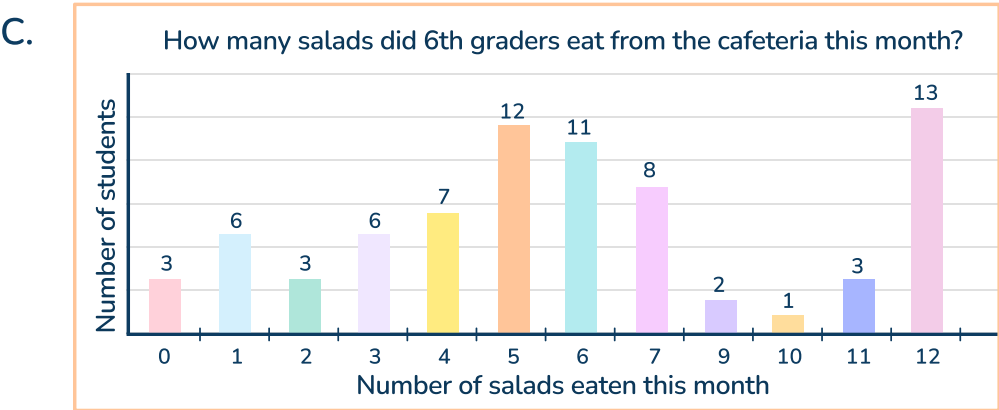
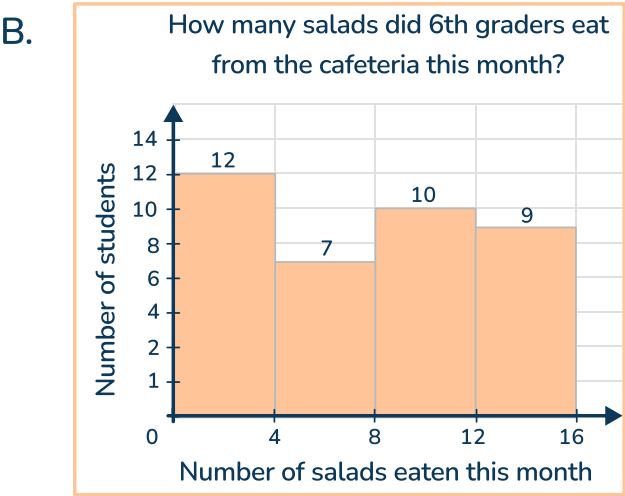
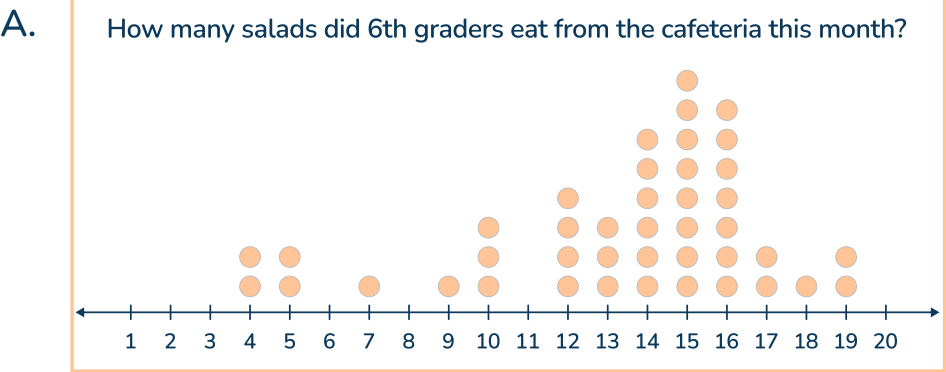
12



Mitchell is painting the outside of the box above. How many square millimeters does he paint?

- A. 578.47 mm<sup>2</sup>
- B. 303.52 mm<sup>2</sup>
- C. 32.2 mm<sup>2</sup>
- D. 37.2 mm<sup>2</sup>

13 Which graph supports the conclusion that “most 6th graders ate between 4-8 salads this month.”?



14 Which statement is true?

- A.  $-3 > -1$
- B.  $-10 > -12$
- C.  $4.2 < 4\frac{1}{5}$
- D.  $8.06 < 8.006$

15 Emery is collecting data on two water filters.

Water Filter A	
Time (minutes)	Ounces filtered
3	54
4	72
7	126

Water Filter B	
Time (minutes)	Ounces filtered
2	38
5	95
6	114

Which filter is faster and by how many ounces per minute?

- A. Filter A is faster by 1 ounce per minute
- B. Filter A is faster by 4 ounces per minute
- C. Filter B is faster by 1 ounce per minute
- D. Filter B is faster by 17 ounces per minute

16 Garrett solved  $723.8 \div 47$  using the standard algorithm. What mistake did Garrett make?

	0	1	5	.	4	0
47	)	7	2	3	.	8
-		0				
		7	2			
-		4	7			
		2	5	3		
-		2	3	5		
			1	8	8	
		-	1	8	8	
					0	

- A. Garrett made a subtraction error.
- B. Garrett did not make a mistake.
- C. Garrett did not include the remainder.
- D. Garrett’s answer has the wrong place value.

17 Caleb is three years younger than his brother Jace. Which equation(s) show the relationship between Caleb’s age,  $c$ , and Jace’s age,  $j$ . Select all the correct answers.

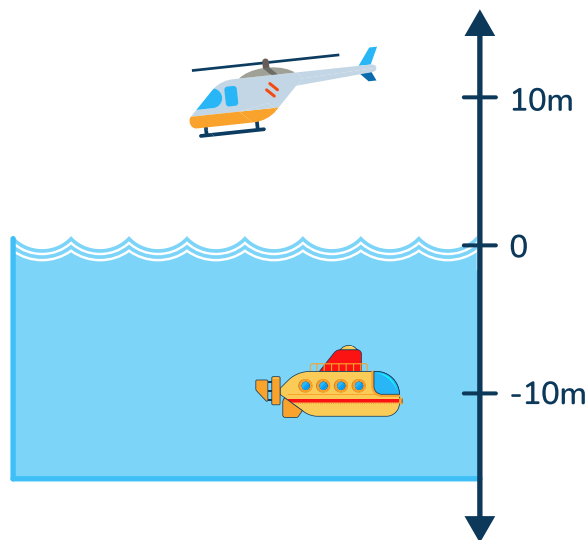
- A.  $c - 3 = j$
- B.  $c + 3 = j$
- C.  $j - 3 = c$
- D.  $j + c = 3$
- E.  $j - c = 3$

18 Which of the following is a statistical question?

- A. What is the temperature outside right now?
- B. How many hours are in a day?
- C. What time does the bus arrive each morning?
- D. How many siblings do the students in this class have?

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19 The diagram below shows the location of a helicopter and a submarine in comparison to sea level.



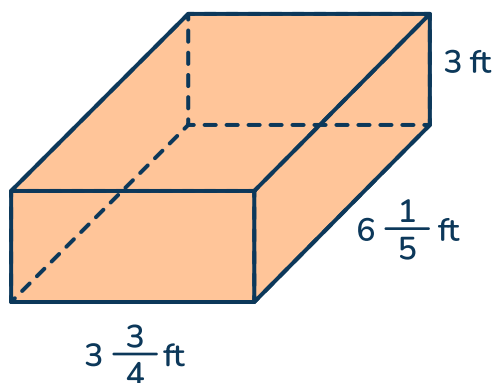
Which statement is true?

- A. The helicopter is  $20m$  higher the submarine.
- B. The helicopter is  $10m$  higher than the submarine.
- C. The water the submarine is in measures  $-10$  degrees.
- D. The sea level is at 0, with the submarine above and the helicopter below.

20 Solve  $2^2(9 - 4 + 2) \div \frac{1}{2}$ .

- A. 14
  - B. 107
  - C. 56
  - D. 40
- 

21 Calculate the volume of the rectangular prism.



- A.  $65\frac{1}{2}$  ft<sup>3</sup>
- B.  $54\frac{4}{9}$  ft<sup>3</sup>
- C.  $70\frac{1}{4}$  ft<sup>3</sup>
- D.  $69\frac{3}{4}$  ft<sup>3</sup>

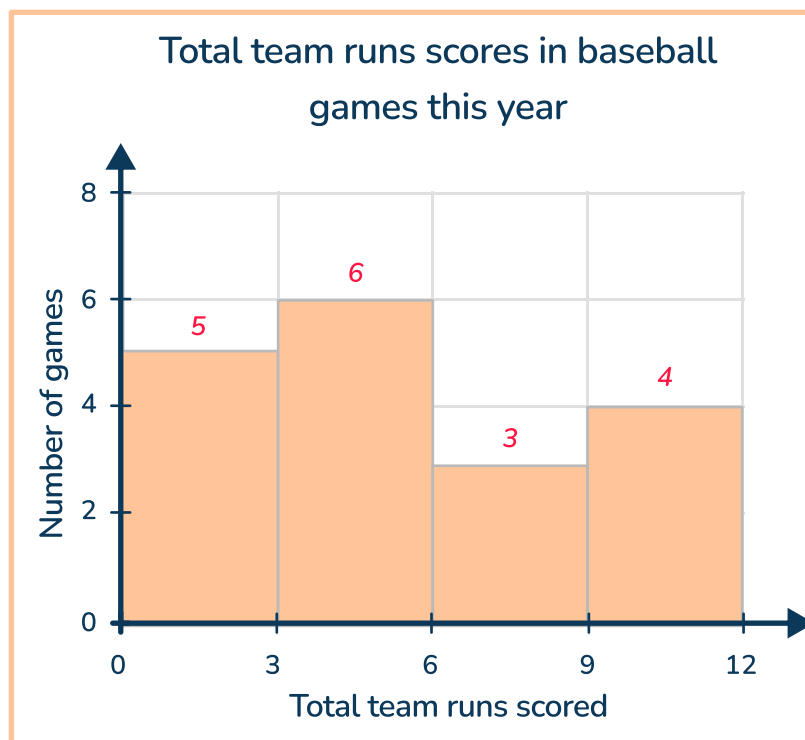


- 22 The PTA is selling tickets to the Fall Festival for \$5. Jasmine wrote the following equation:  $5x = y$ .

Which statements correctly describe Jasmine's equation within the context?  
Select all the correct answers.

- A.  $x$  is the price of one ticket
- B. 5 is the total number of tickets sold so far
- C.  $y$  is the total dollars for  $x$  tickets sold
- D.  $y$  has only one correct solution
- E.  $5x$  is the ticket price multiplied by the tickets sold

23



In the histogram above, which bin has the median data point?

- A. 0-3
- B. 3-6
- C. 6-9
- D. 9-12

- 24 Are the two expressions equivalent? Why or why not?

$$4a - 6c \quad \text{and} \quad 6c - 4a$$

- A. No, because  $-6c$  is not the same as  $6c$ .
  - B. Yes, because they both have the terms  $6c$  and  $4a$ .
  - C. No, because equivalent expressions cannot have two variables.
  - D. Yes, because they are both subtracting the same amount, just in a different order.
- 

- 25 For every 2 cups of dog food, there are 4 dog treats. Which statement about the ratio is true?

- A. For every 10 cups of dog food, there are 21 dog treats.
- B. There is  $\frac{1}{2}$  of a cup of dog food for every dog treat.
- C. There is a cup of water for every dog treat.
- D. For every 4 cups of dog food, there are 10 dog treats.

26 Talia is solving the two equations below. She says, “I can just solve expression a, because expression b will have the same answer.” Do you agree? Why or why not?

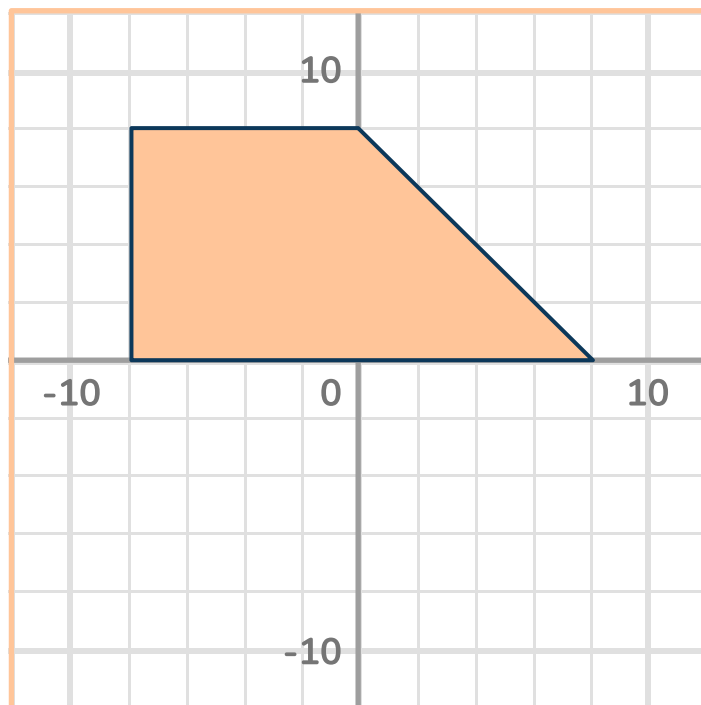
- Expression a:  $(5 + 44)^2$
- Expression b:  $5 + 44^2$

- A. Yes, because the order of operations is the same.
- B. No, because expression a will add first and expression b will not.
- C. Yes, because the expressions have the same operations.
- D. No, because expression b will multiply by 2 first and expression a will not.
- 

27 Which expression is equivalent to  $35 + 105$ ?

- A.  $7(35 + 105)$
- B.  $7 \times 5 + 15$
- C.  $7 \times (28 + 98)$
- D.  $7(5 + 15)$

28 What is the area of the shape shown?

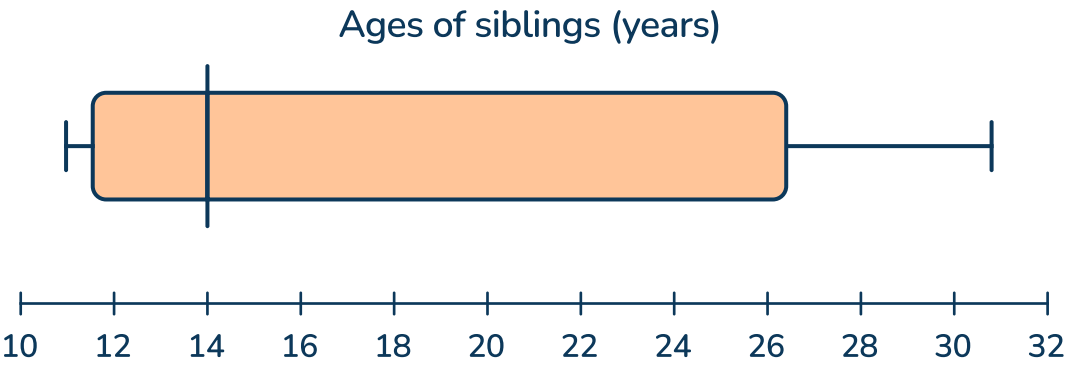


- A. 16.5 units<sup>2</sup>
- B. 88 units<sup>2</sup>
- C. 66 units<sup>2</sup>
- D. 96 units<sup>2</sup>

29 Which numbers are solutions for  $t \geq -2$ .

- A. -3
- B. -4
- C. -2
- D.  $\frac{1}{12}$
- E.  $-\frac{1}{12}$

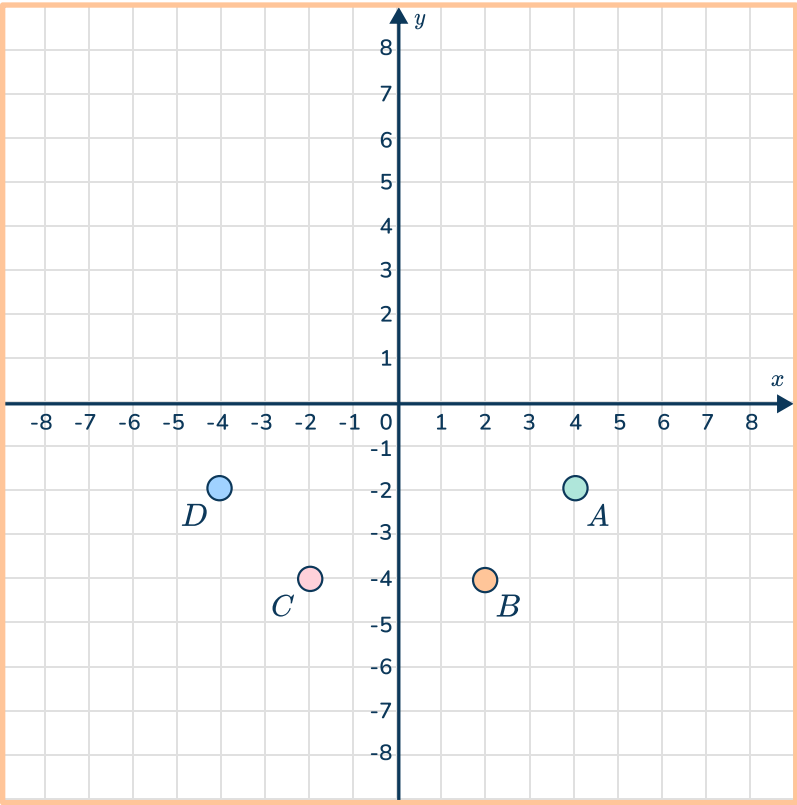
30 Which statement about the data shown in the box plot below is true?



- A. The range is 22 years and the IQR is 15.
- B. The second half of the data has more variability than the first half.
- C. The median age is 21 years.
- D. At least half the siblings are 16 years old or less.

31 Which point shows the coordinates  $(-4, -2)$ ?

- A. Point A
- B. Point B
- C. Point C
- D. Point D



32 Which expression shows “3 more than the quotient of  $a$  and 5”?

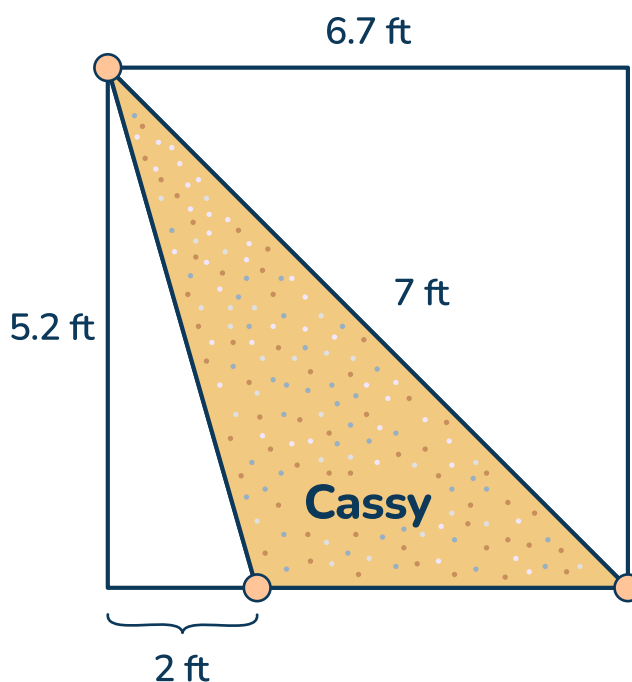
A.  $3 + a \div 5$

B.  $\frac{a}{5} + 3$

C.  $5a + 3$

D.  $3 + 5a$

33 Cassy is picking up trash on the beach. The diagram below shows the part of the beach she is responsible for picking up.



How many square feet of the beach will Cassy pick up?

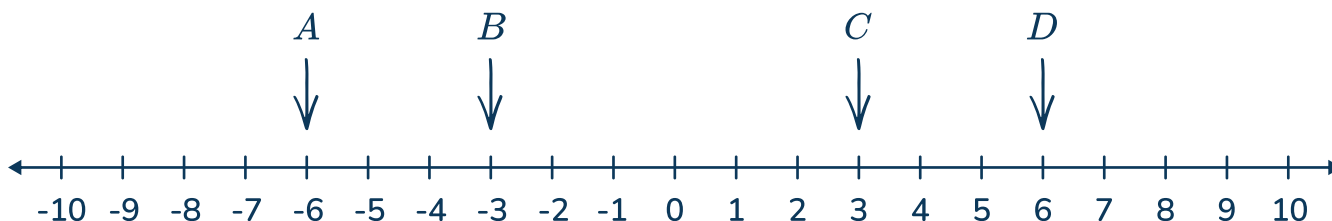
A.  $12.22 \text{ ft}^2$

B.  $5.2 \text{ ft}^2$

C.  $17.42 \text{ ft}^2$

D.  $34.84 \text{ ft}^2$

34 Where is  $-(-6)$  on the number line?

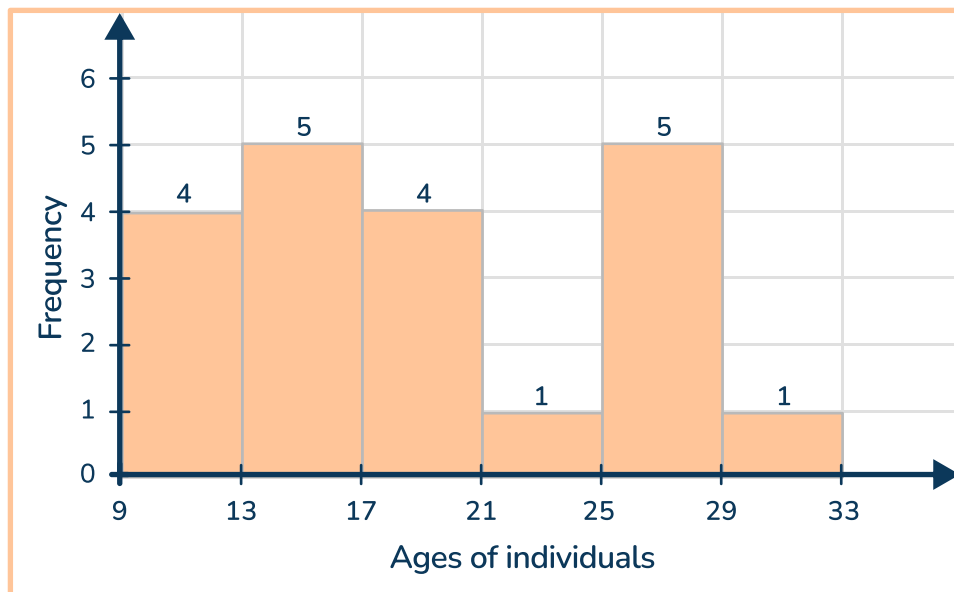


- A. A
- B. B
- C. C
- D. D

35 Taylor pays \$42 for supplies to make necklaces. She sells the necklaces for \$8 each. Which equation shows Taylor's profit,  $p$ , after selling  $n$  bracelets?

- A.  $42 + 8n = p$
- B.  $p = 8n - 42$
- C.  $42 + 8p = n$
- D.  $n = 8p - 42$

36



Which statements are true about the data shown in the histogram above?

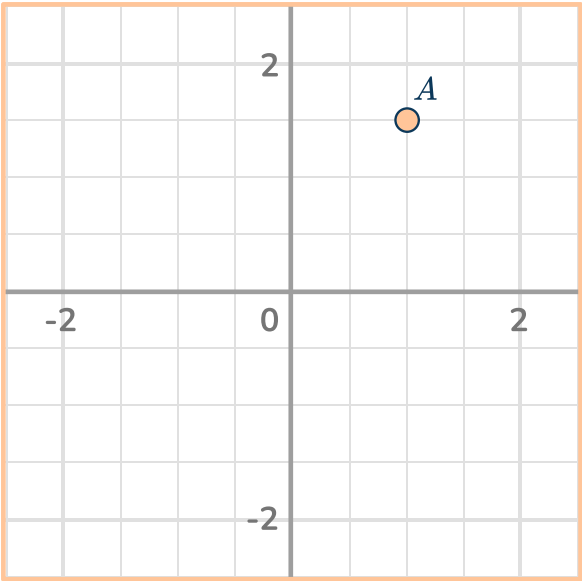
- A. The graph includes data points for 20 people.
- B. The oldest individual was 29.
- C. The bin that has the median is 17-21.
- D. All individuals were over the age of 10.
- E. Each bar shows 1 age - with 5 shown in total.

37 There are  $4\frac{1}{8}$  cups of dog food in the bag. If Sheila needs  $\frac{2}{3}$  of a cup of dog food each day, how many complete days of dog food does he have left?

- A.  $6\frac{3}{16}$  days
- B. 7 days
- C. 3 days
- D. 6 days



38



Point B is...

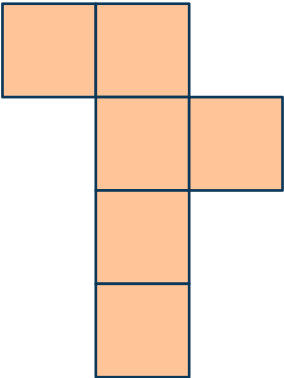
- in Quadrant 2
- 2.5 units away from Point A

Point C is Point B reflected across the  $x$ -axis.

What are the coordinates of Point C?

- A. (2.5, 1.5)
- B. (-1.5, -2)
- C. (-1, -1.5)
- D. (-1.5, -1.5)

39 A cube has a side length of 3.9 inches. The net of the cube is shown below.



Ivy folds the cube up and fills it with water. How many cubic inches of water are in the cube?

- A. 91.26 inches<sup>2</sup>
- B. 59.319 inches<sup>3</sup>
- C. 58.319 inches<sup>2</sup>
- D. 92.63 inches<sup>3</sup>

- 40 For the paint color pink, the ratio of ounces of red paint to white paint is 3:2. What is a possible mixture that will create pink?

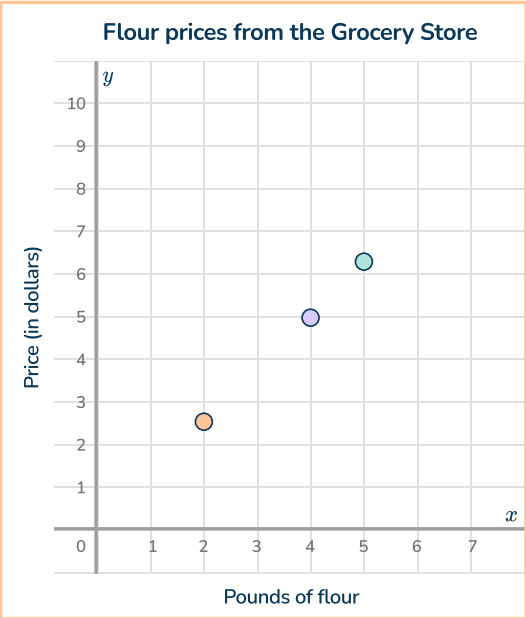
- A. 33 ounces of white and 22 ounces of red
- B. 45 ounces of white and 32 ounces of red
- C. 42 ounces of red and 28 ounces of white
- D. 48 ounces of red and 72 ounces of white

Standard: 6.EE.9, 6.RP.3, 6.EE.7

DOK 3

Short Answer Response - 6 points

41 The graph and table below show information about flour being sold by a grocery store and by a miller.



Flour prices from the Miller	
Pounds of flour	Price
4	\$4.28
5	\$5.35
8	\$8.56

Part A: Which flour is cheaper per pound? Explain how you solved.

A bake shop sells flour in 3 pound bags. They use the equation  $3.45b = t$ , where  $b$  is the number of bags and  $t$  is the total price.

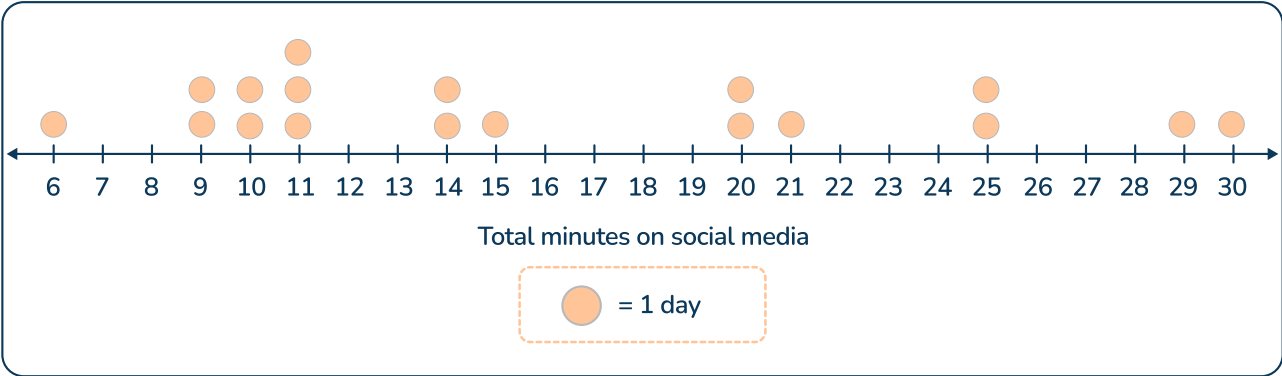
Part B: Compare the price of flour per pound at the bake shop to the flour from Part A? Explain how you solved.

Extended response - 6 points

Standard: 6.SP.2, 6.SP.3, 6.SP.5, 6.NS.3

DOK 3

42 Veronica is keeping track of how many minutes she spends on social media each day. Each day she records the total minutes spent on the apps.



Part A:

Calculate the following measures of center and spread of the data set.

Mean: \_\_\_\_\_ Median: \_\_\_\_\_ Mode: \_\_\_\_\_ Range: \_\_\_\_\_

Part B: When Veronica started, her goal was to spend 15 minutes a day on social media, on average. Is she meeting her goal? Why or why not?

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## Answer Key - Multiple Choice

Item number	Correct answer	Standard(s)	DOK
1	A	6.RP.1	DOK 1
2	B	6.NS.6c	DOK 1
3	C	6.EE.3	DOK 2
4	B	6.G.4	DOK 1
5	C	6.RP.3b	DOK 2
6	A, B	6.NS.1	DOK 3
7	D	6.EE.8	DOK 2
8	A	6.SP.5b	DOK 1
9	C	6.RP.3c	DOK 2
10	B	6.NS.3	DOK 1
11	D	6.EE.5	DOK 1
12	C	6.G.4	DOK 2
13	D	6.SP.4, 6.SP.5c	DOK 2
14	B	6.NS.7	DOK 1
15	C	6.RP.3a, 6.RP.3b	DOK 2
16	B	6.NS.2	DOK 3
17	B, C, E	6.EE.6, 6.EE.7	DOK 2
18	D	6.SP.1	DOK 1
19	A	6.NS.5	DOK 2

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Item number	Correct answer	Standard(s)	DOK
20	C	6.EE.1	DOK 1
21	D	6.G.2	DOK 1
22	C, E	6.EE.9	DOK 2
23	B	6.SP.3, 6.SP.5c	DOK 1
24	A	6.EE.4	DOK 3
25	B	6.RP.1, 6.RP.2, 6.RP.3	DOK 2
26	B	6.EE.1	DOK 2
27	D	6.NS.4	DOK 1
28	D	6.G.1, 6.G.3	DOK 2
29	C, D, E	6.EE.8, 6.NS.7a	DOK 1
30	B	6.SP.4, 6.SP.5c, 6.SP.5d	DOK 2
31	D	6.NS.8	DOK 1
32	B	6.EE.2	DOK 1
33	A	6.G.1	DOK 2
34	D	6.NS.6a	DOK 1
35	B	6.EE.9	DOK 2
36	A, C	6.SP.2, 6.SP.4, 6.SP.5b	DOK 2
37	D	6.NS.1	DOK 2
38	D	6.NS.8	DOK 2
39	B	6.G.2	DOK 2
40	C	6.RP.1, 6.RP.3	DOK 1

## Washington State Practice Math Test | Grade 6 | Questions

Item	KEY	Rationale
41	6 points	<p>Student correctly calculates the unit flour prices:</p> <ul style="list-style-type: none"> <li>• Grocery store - \$1.25 per pound</li> <li>• Miller - \$1.07 per pound</li> <li>• Bake shop - \$1.15 per pound</li> </ul> <p>Student clearly explains how they found the unit price from the graph, table and equation.</p>
	5 points	<p>Student correctly calculates the unit flour prices:</p> <ul style="list-style-type: none"> <li>• Grocery store - \$1.25 per pound</li> <li>• Miller - \$1.07 per pound</li> <li>• Bake shop - \$1.15 per pound</li> </ul> <p>Student explains how they found the unit price from the graph, table and equation, but some parts of the explanation are incomplete or unclear.</p>
	4 points	<p>Student correctly calculates 2 out of 3 the unit flour prices:</p> <ul style="list-style-type: none"> <li>• Grocery store - \$1.25 per pound</li> <li>• Miller - \$1.07 per pound</li> <li>• Bake shop - \$1.15 per pound</li> </ul> <p>Student explains how they found the unit price from the graph, table and equation.</p>
	3 points	<p>Student correctly calculates 2 out of 3 the unit flour prices:</p> <ul style="list-style-type: none"> <li>• Grocery store - \$1.25 per pound</li> <li>• Miller - \$1.07 per pound</li> <li>• Bake shop - \$1.15 per pound</li> </ul> <p>Student explains how they found the unit price from the graph, table and equation, but some parts of the explanation are incomplete or unclear.</p>
	2 points	<p>Student correctly calculates 1 out of 3 the unit flour prices:</p> <ul style="list-style-type: none"> <li>• Grocery store - \$1.25 per pound</li> <li>• Miller - \$1.07 per pound</li> <li>• Bake shop - \$1.15 per pound</li> </ul> <p>Student explains how they found the unit price from the graph, table and equation, but some parts of the explanation are incomplete or unclear.</p>

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Item	KEY	Rationale
	1 point	<p>Student miscalculates all of the unit flour prices:</p> <ul style="list-style-type: none"><li>• Grocery store - \$1.25 per pound</li><li>• Miller - \$1.07 per pound</li><li>• Bake shop - \$1.15 per pound</li></ul> <p>Student explains how they attempted to find the unit price from the graph, table and equation, but some parts of the explanation are incomplete or unclear.</p>
	0 points	<p>Response is blank or does not include any correct calculations or explanations.</p>



## Washington State Practice Math Test | Grade 6 | Questions

Item	KEY	Rationale
42	6 points	<p>Student correctly calculates:</p> <ul style="list-style-type: none"> <li>• Mean - 16.11</li> <li>• Median - 14</li> <li>• Mode - 11</li> <li>• Range - 24</li> </ul> <p>Student correctly describes the overall spread, connecting both the center and spread to Veronica's goal.</p> <p>*Response may vary, but should clearly explain the connection between the measures of center and spread.</p>
	5 points	<p>Student correctly calculates:</p> <ul style="list-style-type: none"> <li>• Mean - 16.11</li> <li>• Median - 14</li> <li>• Mode - 11</li> <li>• Range - 24</li> </ul> <p>Student describes the overall spread, connecting both the center and spread to Veronica's goal, but some parts may be incomplete or unclear.</p>
	4 points	<p>Student correctly calculates 3 out of 4:</p> <ul style="list-style-type: none"> <li>• Mean - 16.11</li> <li>• Median - 14</li> <li>• Mode - 11</li> <li>• Range - 24</li> </ul> <p>Student correctly describes the overall spread, connecting both the center and spread to Veronica's goal.</p>
	3 points	<p>Student correctly calculates 3 out of 4:</p> <ul style="list-style-type: none"> <li>• Mean - 16.11</li> <li>• Median - 14</li> <li>• Mode - 11</li> <li>• Range - 24</li> </ul> <p>Student describes the overall spread, connecting both the center and spread to Veronica's goal, but some parts may be incomplete or unclear.</p>

Washington State Practice Math Test | Grade 6 | Questions

Item	KEY	Rationale
	2 points	<p>Student correctly calculates 2 out of 4:</p> <ul style="list-style-type: none"><li>• Mean - 16.11</li><li>• Median - 14</li><li>• Mode - 11</li><li>• Range - 24</li></ul> <p>Student attempts to describe the overall spread, connecting both the center and spread to Veronica’s goal, but most parts are incomplete or unclear.</p>
	1 point	<p>Student correctly calculates 1 out of 4:</p> <ul style="list-style-type: none"><li>• Mean - 16.11</li><li>• Median - 14</li><li>• Mode - 11</li><li>• Range - 24</li></ul> <p>Student describes the overall spread, connecting both the center and spread to Veronica’s goal, but some parts may be incomplete or unclear.</p>
	0 points	<p>Response is blank or does not include any correct calculations or explanations.</p>

## ANSWERS SORTED BY CCSS STRAND

RP			
1	A	6.RP.1	DOK 1
5	C	6.RP.3b	DOK 2
9	C	6.RP.3c	DOK 2
15	C	6.RP.3a, 6.RP.3b	DOK 2
25	B	6.RP.1, 6.RP.2, 6.RP.3	DOK 1
40	C	6.RP.1, 6.RP.3	DOK 1

NS			
2	B	6.NS.6c	DOK 1
6	A, B	6.NS.1	DOK 3
10	B	6.NS.3	DOK 1
14	B	6.NS.7	DOK 1
16	B	6.NS.2	DOK 3
19	A	6.NS.5	DOK 2
27	D	6.NS.4	DOK 1
31	D	6.NS.8	DOK 1
34	D	6.NS.6a	DOK 1
37	D	6.NS.1	DOK 2
38	D	6.NS.8	DOK 2

# Washington State Practice Math Test | Grade 6 | Questions

EE			
3	C	6.EE.3	DOK 2
7	D	6.EE.8	DOK 2
11	D	6.EE.5	DOK 1
17	B, C, E	6.EE.6, 6.EE.7	DOK 2
20	C	6.EE.1	DOK 1
22	C, E	6.EE.9	DOK 2
24	A	6.EE.4	DOK 3
26	B	6.EE.1	DOK 2
29	C, D, E	6.EE.8, 6.NS.7a	DOK 1
32	B	6.EE.2	DOK 1
35	B	6.EE.9	DOK 2

G			
4	B	6.G.4	DOK 1
12	C	6.G.4	DOK 2
21	D	6.G.2	DOK 1
28	D	6.G.1, 6.G.3	DOK 2
33	A	6.G.1	DOK 2
39	B	6.G.2	DOK 2




SP			
8	A	6.SP.5.b	DOK 1
13	D	6.SP.4, 6.SP.5c	DOK 2
18	D	6.SP.1	DOK 1
23	B	6.SP.3, 6.SP.5c	DOK 1
30	B	6.SP.4, 6.SP.5c, 6.SP.5d	DOK 2
36	A, C	6.SP.2, 6.SP.4, 6.SP.5b	DOK 2

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