THIRD SPACE LEARNING

6th Grade Georgia State Test

State Test Grade 6

Grade 6

Questions

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

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

1 A grocery store has 24 red apples and 38 green apples. What is the ratio of green apples to total apples?

A. 24:38
B. 64:24
C. 12:31
D. 19:31

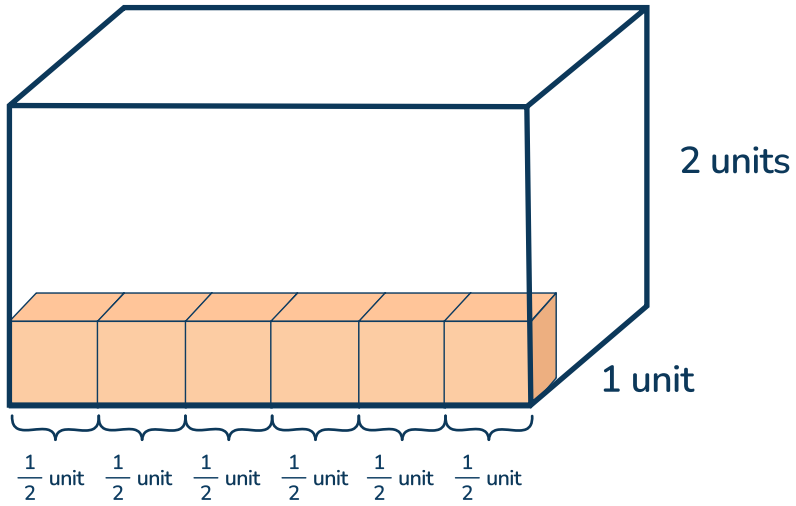
2 Which statement about a is true?

A. $-18 > a$
B. $a = 10$
C. The opposite of a is 15.
D. a is closer to 0 than 12.

3 Which expressions are equivalent to $4x + 24$? Select all the correct answers.

A. $4(x + 20)$
B. $3(x + 8) + x$
C. $4(6 + x)$
D. $2x + 2(x + 12)$
E. $3(x + 21) + x$
F. $28x$

4



How many $\frac{1}{2}$ unit cubes will fill the rectangular prism?

A. 48 units
B. 24 units
C. 10 units
D. 36 units

5 Georgina makes 8 bracelets with 3 yards of string. How many yards of string does she need for 13 bracelets?

A. $34\frac{2}{3}$ yards of string

B. $4\frac{7}{8}$ yards of string

C. 8 yards of string

D. 5 yards of string

---

6 Solve $\frac{5}{7} - \frac{2}{9} =$ _____

7 Isadora needs no more than 14 more volunteers to sign up for the event on Saturday. If v is the number of volunteers, which inequality shows how many Isadora needs?

A. $v \geq 14$
B. $v \leq 14$
C. $v < 14$
D. $v > 14$

---

8 Below are the total scores for the first 5 games Otto's baseball team played.
Total score: 5, 9, 2, 2, 8.

Which statement describes the mean of the data set?

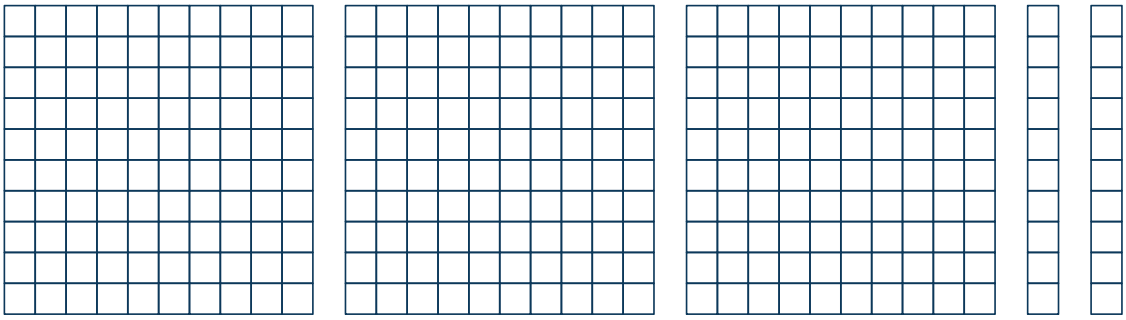
A. Otto's lowest score subtracted from the highest.
B. Otto's most common, repeated score.
C. Sharing Otto's score equally between the 5 games.
D. Ordering Otto's scores from least to greatest and finding the middle value.

9 A pair of shoes was on sale for 25% off. After the discount, Nyla paid $72 for the pair of shoes. What was the original price?

A. $18
B. $54
C. $90
D. $96

---

10 The model below shows 3.2 which will be separated into groups of 0.4.



Use the answer bank to complete the equation to represent the final model.

_____ ☐ _____ = _____

Answer bank:

3.2 0.4 0.8 8 80 2.8 ÷ –

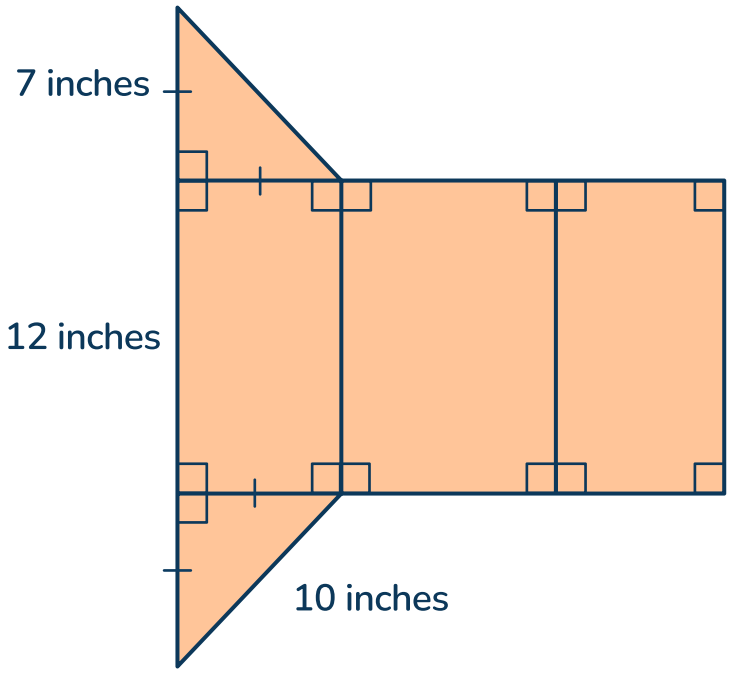
11 $8t < 12$

Which value for t makes the equation true?

A. 2
B. 1
C. 1.5
D. 4

---

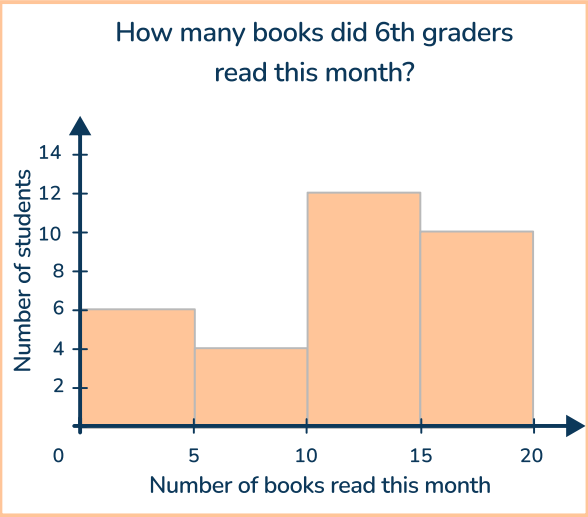
12 Calculate the surface area of the right triangular prism.



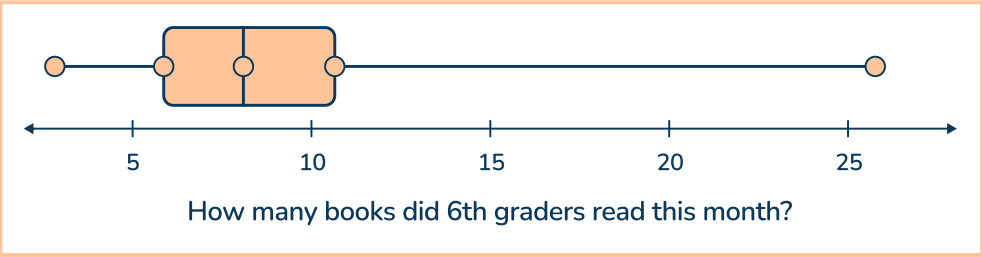
A. 288 inches²
B. 294 inches²
C. 337 inches²
D. 5880 inches²

13 Which graph supports the conclusion that "most 6th graders read 10 or more books this month."

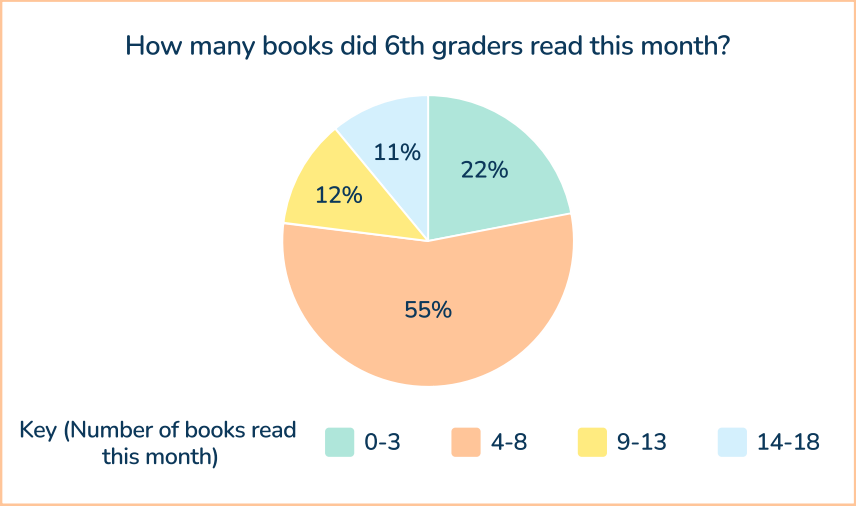
A.



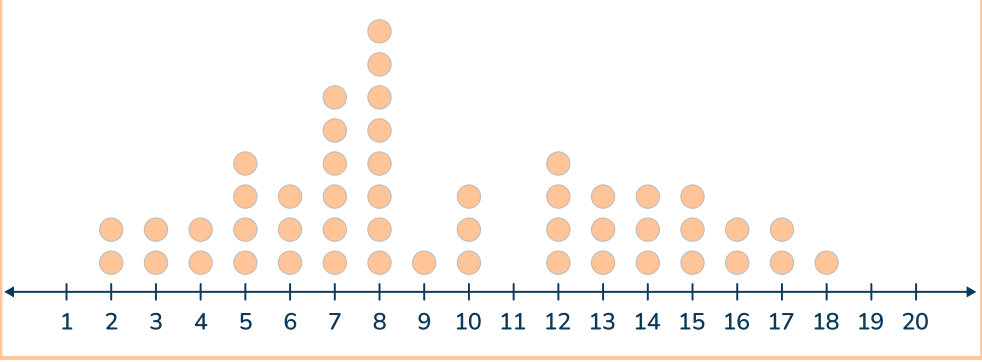
B.



C.



D.



14 Which statement is true?

A. $-5 > -2$

B. $8.6 > 8\frac{1}{3}$

C. $-11 > -19$

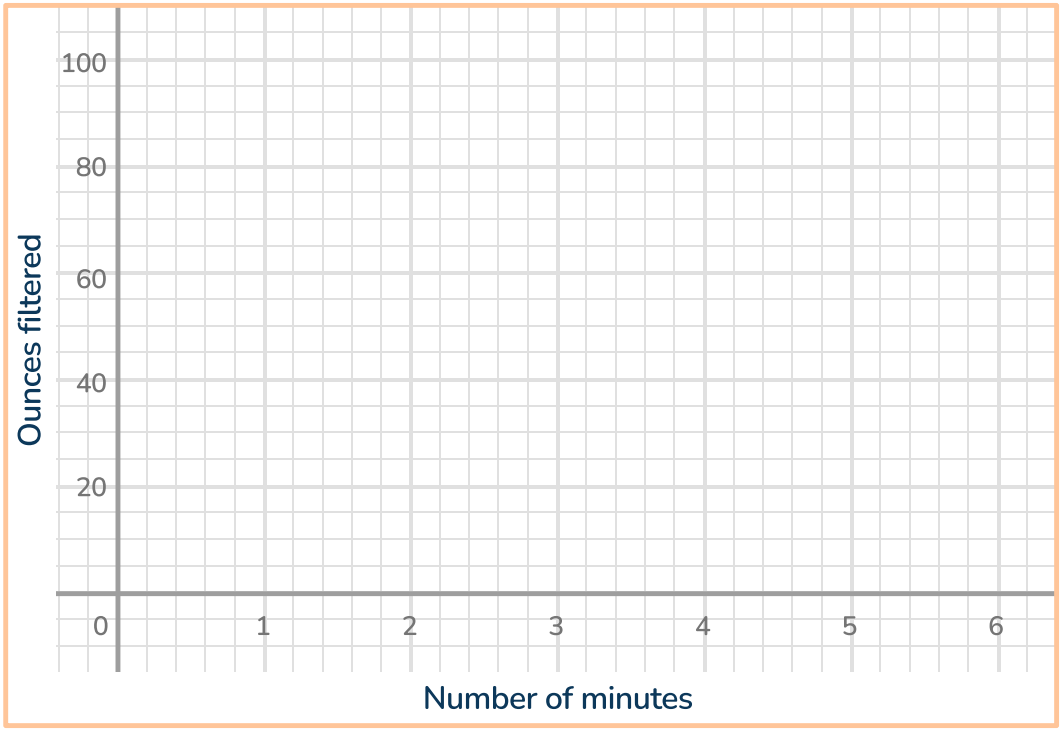
D. $11.05 < 11.005$

---

15 Emery is collecting data on a water filter.

Water Filter	
Time (minutes)	Ounces filtered
2	32
5	?
6	96

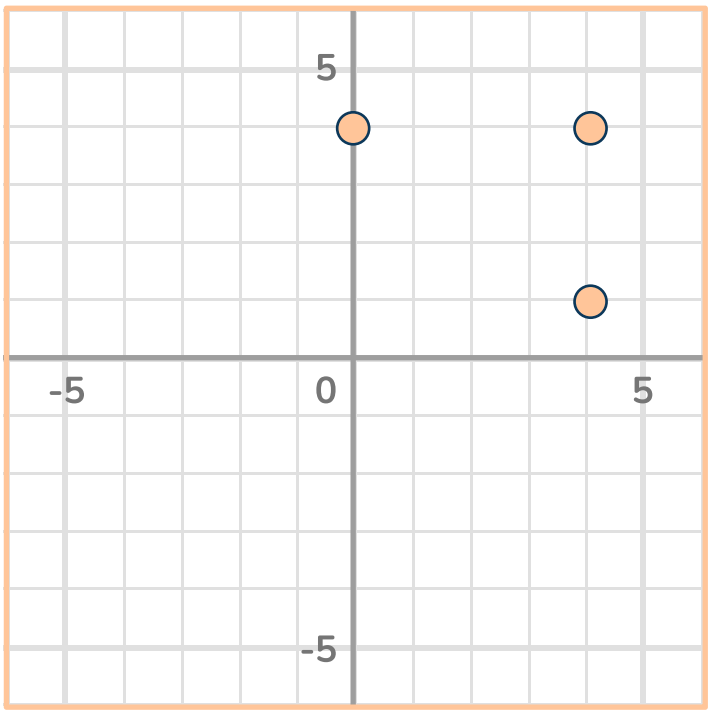
Plot and label the points for 2, 5 and 6 minutes on the coordinate grid.



16 In the small dog section of the dog park, dogs need to weigh 25 pounds or less.

Graph the inequality on the line to show all possible dog weights, in pounds, that are allowed in the small dog section.

17



Adan adds the point (–3, 1) to the grid above. Then Adan connects all four points to form a polygon. What is the name of the polygon Adan creates?

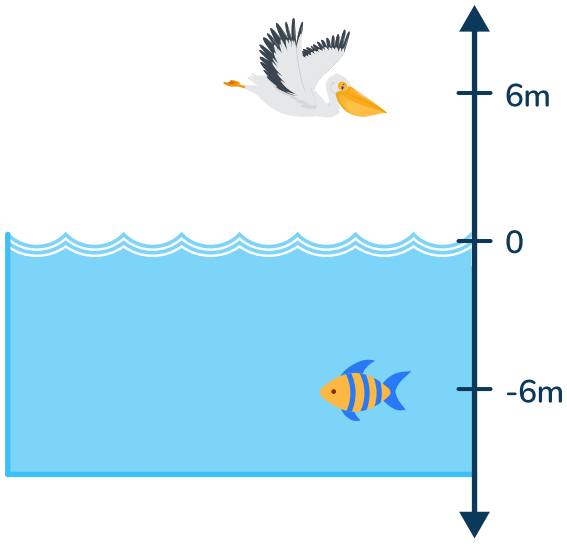
A. Square
B. Rhombus
C. Trapezoid
D. Rectangle

18 Which of the following is a statistical question?

A. What is the temperature outside at recess today?
B. What is the average temperature outside at recess this week?
C. How many days has the temperature outside at recess been above 74°?
D. Does Jesse think the temperature outside at recess is too hot?

---

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



Which statement is true?

A. The seagull is 6m higher than the fish.
B. The fish is 12m below the sea level.
C. The water the fish is in measures -6 degrees.
D. 0 is sea level and the ocean is represented by negative numbers.

20 Which expression is equivalent to $(\frac{2}{5})^4$?

A. $\frac{2}{5} \times \frac{2}{5} \times \frac{2}{5} \times \frac{2}{5}$

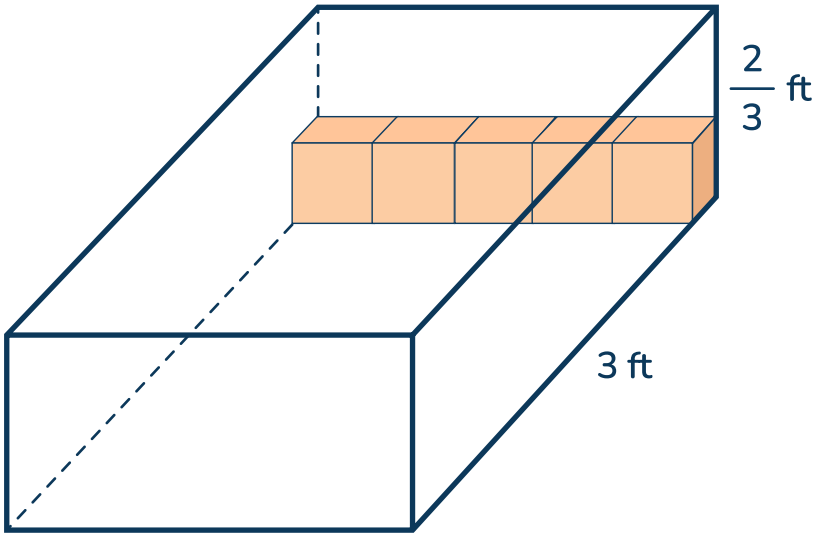
B. $\frac{2}{5} \times 4$

C. $\frac{2 \times 4}{5}$

D. $\frac{2}{5} \times \frac{1}{4}$

---

21 Hank fills the rectangular prism with cubes, leaving no empty space. Each cube has a side length of $\frac{1}{3}$ foot.



How many more cubes are needed to fill the rectangular prism?

A. 5 cubes

B. 40 cubes

C. 85 cubes

D. 90 cubes

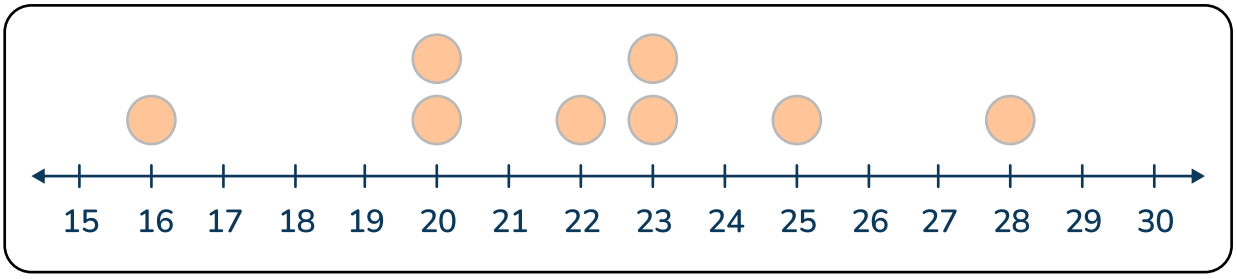
22 A movie ticket costs \$11. Seth wrote the following equation: $11x = y$.

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

A. x is the price of one ticket
B. y is the total dollars for x tickets sold
C. y has only one correct solution
D. 11 is the total number of tickets sold so far
E. $11x$ is the ticket price multiplied by the tickets sold

---

23 Theo counted how many strawberries were in 10 different baskets and plotted some of the baskets on the line plot below. The mean of all the baskets is 22.8 strawberries and the median is 23 strawberries.



Add Xs to complete the line plot and show all the baskets Theo counted.

24 Which expression is equivalent to $4(8 - 6x)$?

A. $32 - 24x$
B. $6 + 2x$
C. $8x$
D. $32 - 6x$

---

25 The table shows the total ounces of seeds, s, given the number of packets, p.

p	s
2	12
4	24
6	36
10	60

Use the options below to create an equation to represent the table and define each variable.

Equation: _____
p is the _____ variable
s is the _____ variable

$12p = s$,	$6p = s$,	$6s = p$,	$6p = s$,	independent,	dependent

26 The number line shown is divided into equal parts.

Which number is the value of p?

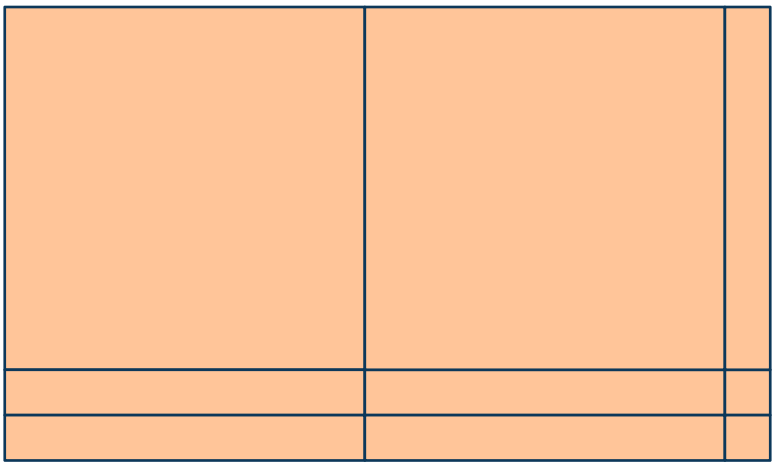
A. $\frac{8}{10}$

B. $1\frac{2}{5}$

C. $\frac{8}{5}$

D. $1\frac{1}{2}$

27



Which equation represents the model?

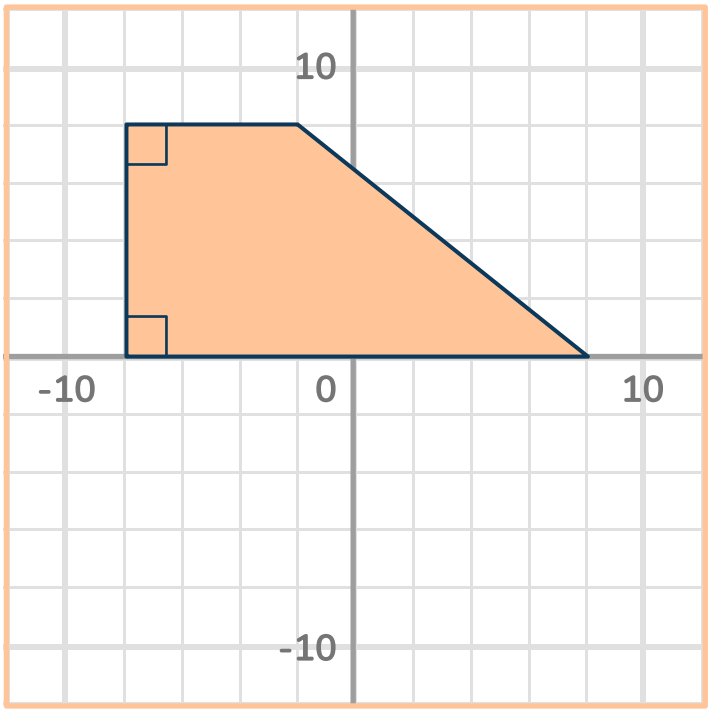
A. $1.2 \times 2.1 = 2.52$

B. $3 \times 3 = 9$

C. $2.01 \times 1.02 = 2.07$

D. $2 \times 1.02 = 4.04$

28 What is the area of the shape shown?



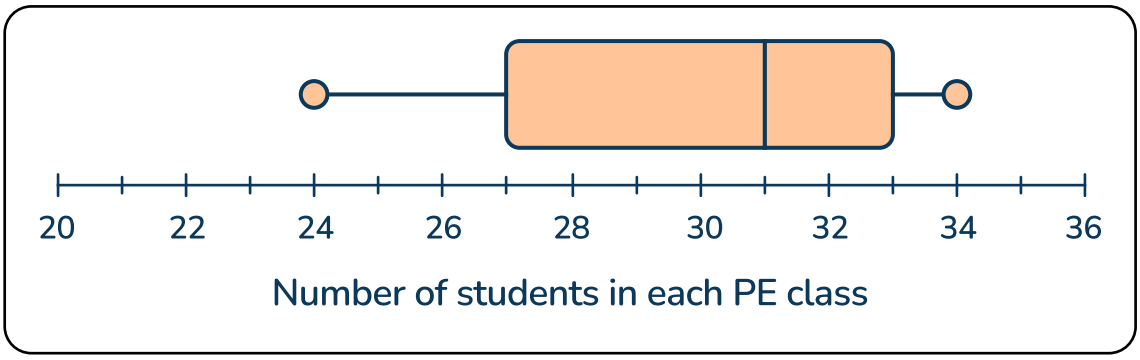
A. 22 units²
B. 44 units²
C. 88 units²
D. 128 units²

---

29 Which numbers are solutions for $20 \geq 2.5m$? Select all the correct answers.

A. 0
B. 4
C. 8
D. 10
E. 14

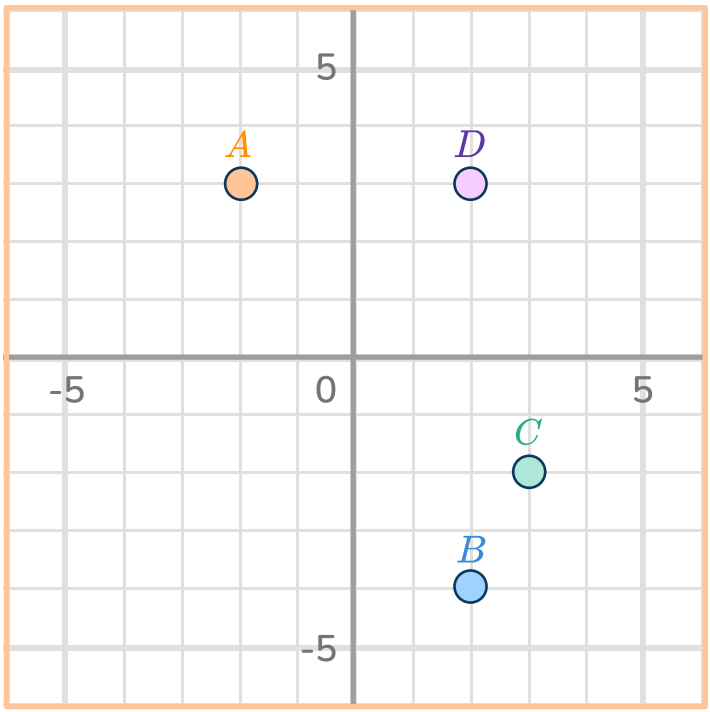
30 Which statement about the data shown in the box plot below is true?



A. The minimum is 21, the maximum is 34 and the range is 11.
B. The top half of the data has less variability than the bottom half.
C. The median class size is 30.
D. At least half the classes are 31 students or less.

---

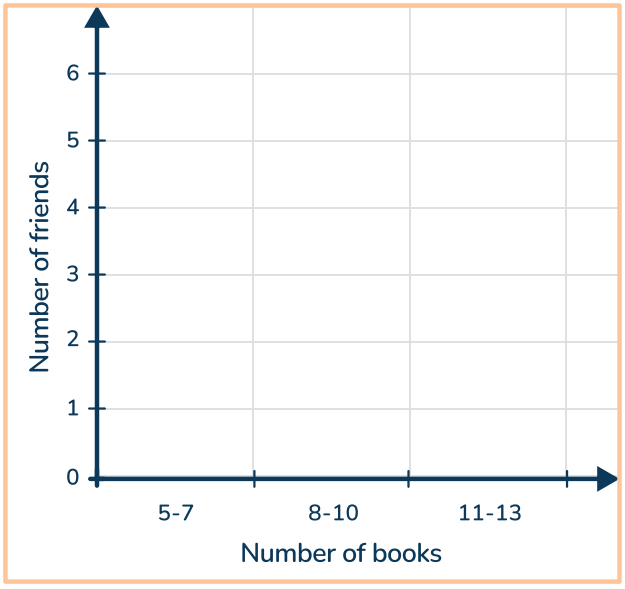
31 Which point shows the coordinates (–2, 3)?



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

32 Desiree asked 10 friends how many books they read over the summer. Create a histogram of the data.

Data: 10, 12, 8, 5, 13, 10, 8, 7, 6, 12

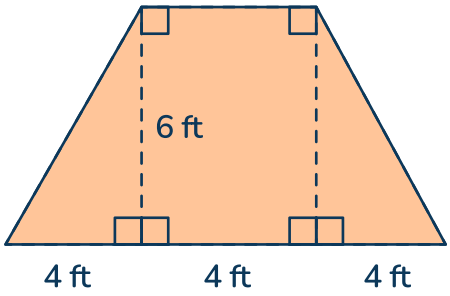


---

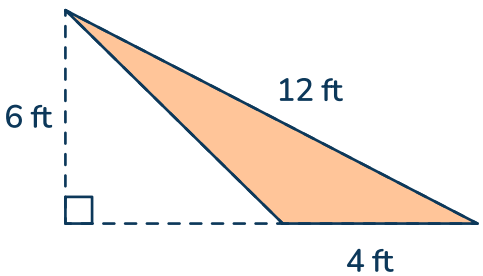
33 Which irregular polygon has an area of 48 ft²?

A.

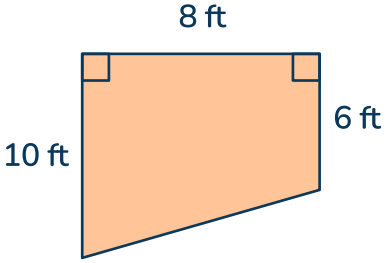
B.



C.



D.



34 Place the values in ascending order.

|-3.7|, –3.4, 3.1, –1.4

---

35 Jerome pays $65 for supplies to make bracelets. He sells the bracelets for $8 each. Which equation shows how much money Jerome earns, e, after selling b bracelets?

A. $65 + 8e = b$
B. $e = 8b - 65$
C. $65 + 8b = e$
D. $b = 8e - 65$

36

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

A. The graph includes data points for 18 students.

B. The largest shoe size is 13.

C. Only whole number shoe sizes were collected.

D. The median and mode bin are the same.

E. Each bar shows 1 shoe size - with 4 sizes shown in total.

---

37 There are $5\frac{1}{5}$ cups of tomato sauce in the kitchen. If Chef George needs $\frac{2}{3}$ of a cup of tomato sauce for each recipe, how many complete recipes can he make?

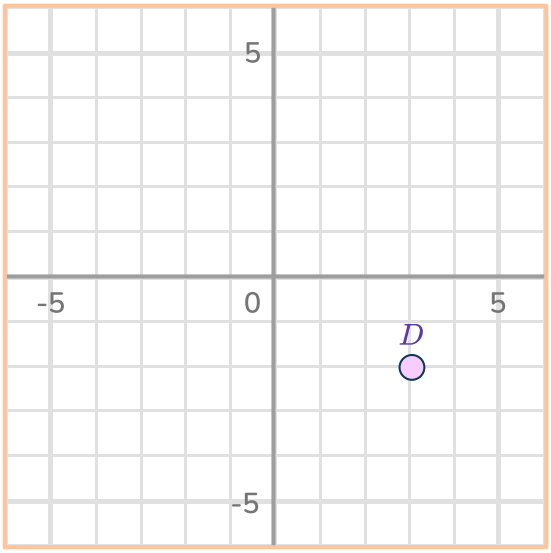
A. $7\frac{4}{5}$ recipes

B. 8 recipes

C. 7 recipes

D. 6 recipes

38

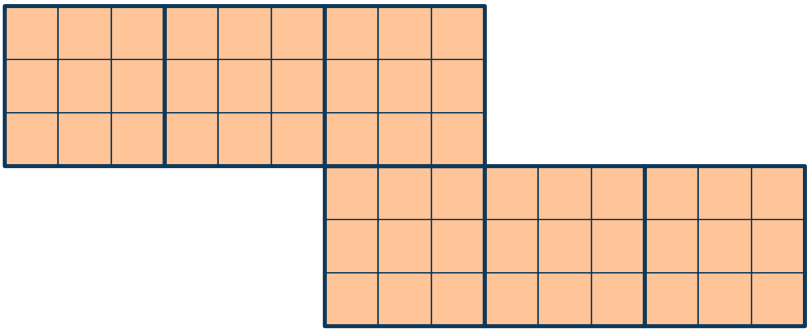


Point B is 5 units away from point D. What are the possible coordinates for point B? Select all the correct answers.

A. (3, –2)
B. (3, 3)
C. (–2, 3)
D. (–3, 2)
E. (–2, –2)

---

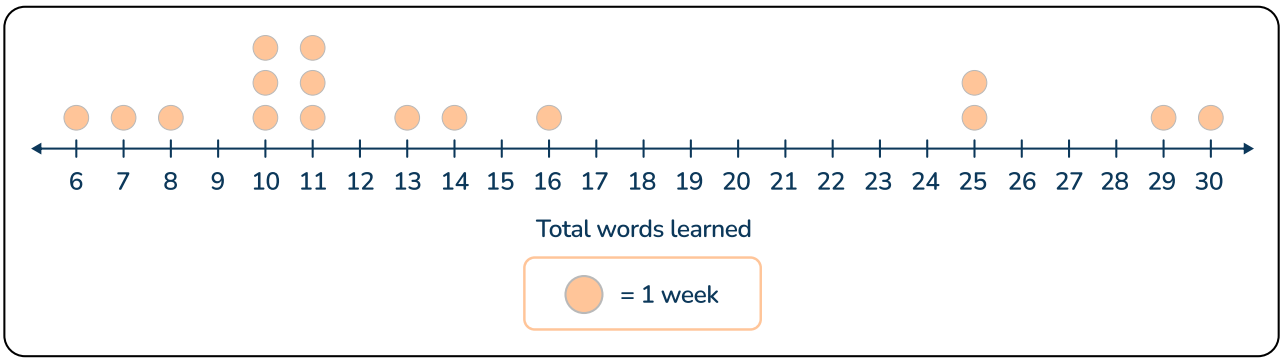
39 Below is a net of a cube.



Circle the correct number and unit.

The surface area of the cube is [6, 27, 45, 54] [cubes, square units].

40 Marcus is learning new words in German. Each week he records how many words he has learned.

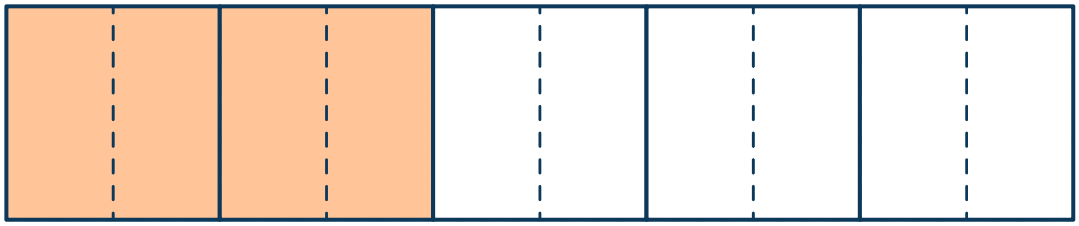


Calculate the following measures of center and spread of the data set.

Mean: _____ Median:_____ Range:_____

---

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



A. $\frac{2}{5} \div \frac{1}{10}$

B. $\frac{1}{5} \div \frac{1}{10}$

C. $\frac{4}{6} \div \frac{1}{4}$

D. $\frac{4}{10} \div \frac{1}{5}$

E. $\frac{4}{5} \div \frac{1}{6}$

42 Ariel is designing cards. Each card has 2 flower stickers and 1 heart sticker. Flower stickers come in packs of 3 and heart stickers come in packs of 5. Ariel started with complete packs and had no stickers left over after all the cards were made. How many packs of each did Ariel start with?

A. 5 packs of flower stickers; 3 packs of heart stickers
B. 10 packs of flower stickers; 3 packs of heart stickers
C. 3 packs of flower stickers; 5 packs of heart stickers
D. 10 packs of flower stickers; 6 packs of heart stickers

---

43 Which expression shows “4 less than the product of 5 and b”?

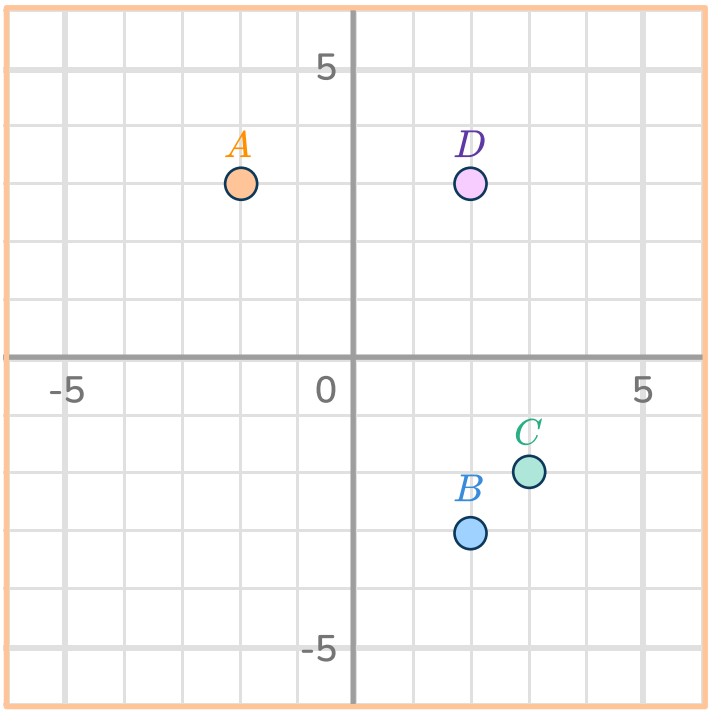
A. $4b$ - 5

B. 4 - $5b$

C. $5b$ - 4

D. 4 - $5b$

44



Which statements are true about the coordinates on the plane? Select all the correct answers.

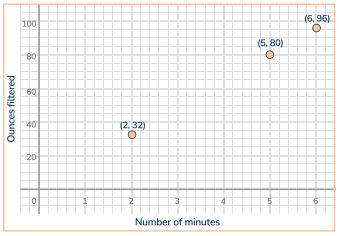
A. Points A and D are the same distance from the y-axis.
B. Point A is the first quadrant and point D is in the second.
C. Point B is in the fourth quadrant because the x value is negative.
D. The distance from point B and A is 4 units.
E. Point B and C have the same y value.

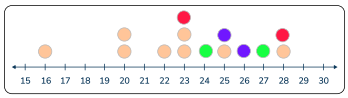
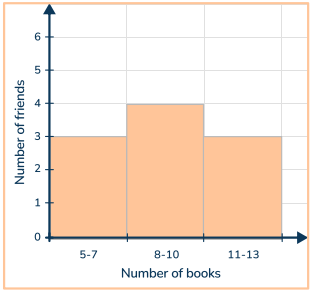
---

45 Will is placing pencils and pens in a jar at a ratio of 2 to 5. If there are 35 pencils and pens in total, how many of each are in the jar? Fill in the blanks.

_____ pencils _____ pens

Answer Key

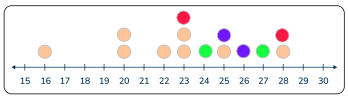
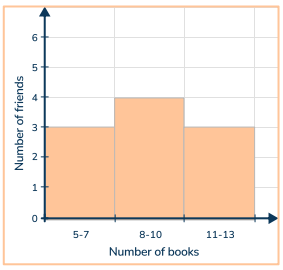
Item number	Correct answer	Standard(s)	DOK
1	D	**6.NR.4.1**	DOK 1
2	C	**6.NR.3.2, 6.NR.3.3**	DOK 2
3	B, C, D	**6.PAR.6.5**	DOK 1
4	A	**6.GSR.5.3**	DOK 2
5	B	**6.NR.4.5**	DOK 2
6	$\frac{31}{63}$	**6.NR.1.1**	DOK 1
7	B	**6.PAR.7.2**	DOK 2
8	C	**6.NR.2.1**	DOK 2
9	D	**6.NR.4.6**	DOK 2
10	3.2 ÷ 0.4 = 8	**6.NR.1.3**	DOK 2
11	B	**6.PAR.7.1**	DOK 1
12	C	**6.GSR.5.2**	DOK 2
13	A	**6.NR.2.3**	DOK 2
14	B, C	**6.NR.3.4**	DOK 1
15		**6.NR.4.2**	DOK 2
16		**6.PAR.7.4**	DOK 2
17	C	**6.PAR.8.4**	DOK 2

Item number	Correct answer	Standard(s)	DOK
18	B	**6.NR.2.4**	DOK 1
19	D	**6.NR.3.1**	DOK 2
20	A	**6.PAR.6.1**	DOK 1
21	C	**6.GSR.5.3**	DOK 2
22	B, E	**6.PAR.7.2**	DOK 2
23	 **Three possible correct answers	**6.NR.2.4, 6.NR.2**	DOK 2
24	A	**6.PAR.6.5**	DOK 1
25	Equation: $6p = s$ p is the independent variable s is the dependent variable	**6.NR.4.4**	DOK 2
26	C	**6.PAR.8.1**	DOK 1
27	A	**6.NR.1.3**	DOK 2
28	C	**6.GSR.5.1**	DOK 2
29	A, B, C	**6.PAR.7.2**	DOK 1
30	B, D	**6.NR.2.2, 6.NR.2.3**	DOK 2
31	A	**6.PAR.8.1**	DOK 1
32		**6.NR.2.2**	DOK 1

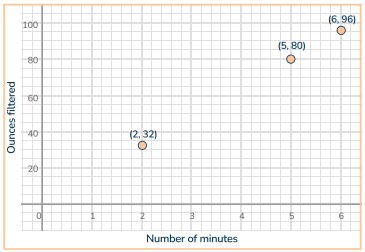
Item number	Correct answer	Standard(s)	DOK
33	B	**6.GSR.5.1**	DOK 1
34	–3.4, –1.4, 3.1, |-3.7|	**6.NR.3.4**	DOK 1
35	B	**6.PAR.7.3**	DOK 2
36	A, D	**6.NR.2.2, 6.NR.2.3**	DOK 2
37	C	**6.NR.1.2**	DOK 2
38	B, E	**6.PAR.8.3**	DOK 2
39	54 square units	**6.GSR.5.2**	DOK 2
40	Mean: 14.75, Median: 11, Range: 24	**6.NR.2.3**	DOK 2
41	A, D	**6.NR.1.2**	DOK 3
42	B	**6.PAR.6.2**	DOK 2
43	C	**6.PAR.6.3**	DOK 1
44	A, B	**6.PAR.8.2, 6.PAR.8.3**	DOK 2
45	10 pencils, 25 pens	**6.NR.4.2, 6.NR.4.5**	DOK 2

ANSWERS SORTED BY COMPETENCIES

4.NR.1 (Numerical Reaso6.NR.1 (Numerical Reasoning Competency 1)ning Competency 1)			
6	$\frac{31}{63}$	**6.NR.1.1**	DOK 1
10	3.2 ÷ 0.4 = 8	**6.NR.1.3**	DOK 2
27	A	**6.NR.1.3**	DOK 2
37	C	**6.NR.1.2**	DOK 2
41	A, D	**6.NR.1.2**	DOK 3

6.NR.2 (Numerical Reasoning Competency 2)			
8	C	**6.NR.2.1**	DOK 2
13	A	**6.NR.2.3**	DOK 2
18	B	**6.NR.2.4**	DOK 1
23	 **Three possible correct answers	**6.NR.2.4, 6.NR.2.6**	DOK 2
30	B, D	**6.NR.2.2, 6.NR.2.3**	DOK 2
32		**6.NR.2.2**	DOK 1
36	A, D	**6.NR.2.2, 6.NR.2.3**	DOK 2
40	Mean - 14.75, Median - 11, Range - 24	**6.NR.2.3**	DOK 2

6.NR.3 (Numerical Reasoning Competency 3)			
2	C	**6.NR.3.2, 6.NR.3.3**	DOK 2
14	B, C	**6.NR.3.4**	DOK 1
19	D	**6.NR.3.1**	DOK 2
34	–3.4, –1.4, 3.1 |-3.7|	**6.NR.3.4**	DOK 1

6.NR.4 (Numerical Reasoning Competency 4)			
1	D	**6.NR.4.1**	DOK 1
5	B	**6.NR.4.5**	DOK 2
9	D	**6.NR.4.6**	DOK 2
15		**6.NR.4.2**	DOK 2
25	Equation: $6p = s$ p is the independent variable s is the dependent variable	**6.NR.4.4**	DOK 2
45	10 pencils, 25 pens	**6.NR.4.2, 6.NR.4.5**	DOK 2

**Measurement question - 7th standard

6.GSR.5 (Geometric and Spatial Reasoning Competency 5)			
4	A	**6.GSR.5.3**	DOK 2
12	C	**6.GSR.5.2**	DOK 2
21	C	**6.GSR.5.3**	DOK 2
28	C	**6.GSR.5.1**	DOK 2
33	B	**6.GSR.5.1**	DOK 1
39	54 square units	**6.GSR.5.2**	DOK 2

6.PAR.6 (Patterning & Algebraic Reasoning Competency 6)			
3	B, C, D	**6.PAR.6.5**	DOK 1
20	A	**6.PAR.6.1**	DOK 1
24	A	**6.PAR.6.5**	DOK 1
42	B	**6.PAR.6.2**	DOK 2
43	C	**6.PAR.6.3**	DOK 1

6.PAR.7 (Patterning & Algebraic Reasoning Competency 7)			
7	B	**6.PAR.7.2**	DOK 2
11	B	**6.PAR.7.1**	DOK 1
16		**6.PAR.7.4**	DOK 2
22	B, E	**6.PAR.7.2**	DOK 2
29	A, B, C	**6.PAR.7.4**	DOK 1
35	B	**6.PAR.7.3**	DOK 2

6.PAR.8 (Patterning & Algebraic Reasoning Competency 8)			
17	C	**6.PAR.8.4**	DOK 2
26	C	**6.PAR.8.1**	DOK 1
31	A	**6.PAR.8.1**	DOK 1
38	B, E	**6.PAR.8.3**	DOK 2
44	A, B	**6.PAR.8.2, 6.PAR.8.3**	DOK 1

Do you have a group of students who need a boost in math?

Each student could receive a personalized lesson every week from our specialist one-on-one math tutors.

- Differentiated instruction for each student
- Aligned to your state's standard
- Scaffolded learning to close gaps

Speak to us

thirdspacelearning.com/us/

+1 929-298-4593

hello@thirdspacelearning.com

THIRD SPACE LEARNING