THIRD SPACE LEARNING

5th Grade Maryland State Practice Math Test

Maryland Practice Test Grade 5

Grade 5

Questions

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

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

The table below lists the prices of some of the top selling fruits at the grocery store.

Item	Size	Price
Bananas	1 bunch	$0.72
Blueberries	10 oz container	$3.99
Strawberries	16 oz container	$4.89
Avocado	1 avocado	$1.29
Watermelon	1 watermelon	$9.87
Oranges	4 lb bag	$5.75

1 How much would it cost to buy 4 avocados and a container of strawberries?

A. $6.18
B. $8.76
C. $10.05
D. $24.72

2 What fraction of a meter is 5 centimeters?

A. $\frac{1}{5}$

B. $\frac{1}{4}$

C. $\frac{1}{50}$

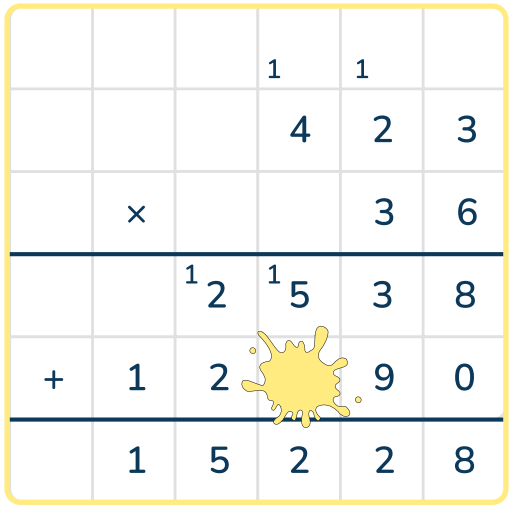
D. $\frac{1}{20}$

---

3 A certain fraction is greater than 0 and less than 1. When that fraction is multiplied by 2, which point(s) on the number line could be the answer? Select all correct answers.

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

4 Grace found the product of 423 and 36. Her work is shown below. Her teacher was unable to read one of the numbers in her work.



			1	1	
			4	2	3
	×			3	6
		1 2	1 5	3	8
+	1	2	[illegible]	9	0
	1	5	2	2	8

What number belongs in the box where the number the teacher can't read is?

A. 6
B. 7
C. 8
D. 9

---

5 Which expression shows '9 less than the product of 2 and 6'?

A. $9 - 2 \div 6$
B. $9 - 2 \times 6$
C. $2 \times 6 - 9$
D. $6 \div 2 - 9$

6 Noah built a new garden bed in his backyard. He needs to fill it with $9\frac{2}{3}$ cubic yards of soil. He has already poured in $5\frac{1}{4}$ cubic yards of soil. How much more soil does he need to pour in to fill the garden bed? Answer in lowest terms.

A. $4\frac{1}{12}$ cubic yards

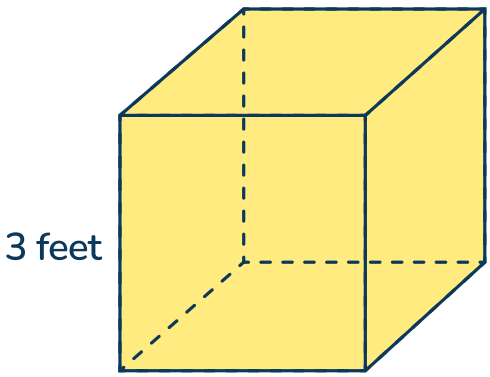
B. $3\frac{9}{12}$ cubic yards

C. $4\frac{1}{2}$ cubic yards

D. $4\frac{5}{12}$ cubic yards

---

7 Which expression represents the volume, in cubic feet, of this cube?



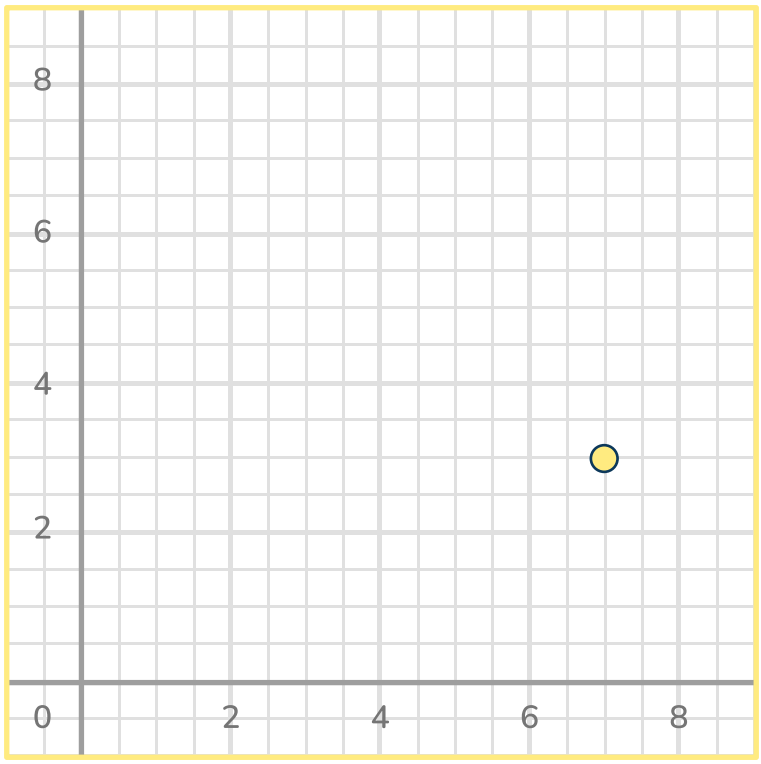
A. $3 \times 3 \times 3$

B. $6 \times (3 + 3 + 3 + 3)$

C. 3×6

D. $3 + 3 + 3 + 3 + 3 + 3$

8



What are the coordinates of the point shown?

A. (6.5, 2.5)
B. (7, 3)
C. (6, 4)
D. (3, 7)

---

9 Harley has been measuring a plant for a science project. The flower has grown $\frac{1}{2}$ of an inch each week and has grown a total of 4 inches taller. How many weeks has Harley been measuring this flower?

A. 2 weeks

B. $\frac{1}{8}$ of a week

C. $1\frac{1}{8}$ weeks

D. 8 weeks

10 Yeva and her 2 friends go out to eat at a restaurant. At the end of the meal, the total bill is $54.78. They decide to split the bill equally. How much will each friend pay?

A. $18.26
B. $109.56
C. $27.39
D. $20.26

---

11 Use the correct order of operations to solve the expression below:

$$9 + 6 \div 3 - 4 + 5$$

A. 2
B. 10
C. 12
D. 6

12 The table below shows the time it took four runners to complete a mile.

Runner	Time (minutes)
1	6.48
2	7.095
3	7.19
4	6.5

Which shows the correct order of the runners' times from highest time to lowest time?

A. Runner 1, Runner 4, Runner 3, Runner 2
B. Runner 3, Runner 2, Runner 4, Runner 1
C. Runner 1, Runner 4, Runner 2, Runner 3
D. Runner 3, Runner 2, Runner 1, Runner 4

---

13 Emma wrote down two patterns.

Pattern A: 0, 10, 20, 30, 40, 50...
Pattern B: 0, 5, 10, 15, 20, 25...

Which statement correctly compares the patterns?

A. The numbers in both patterns start odd, then become even.
B. The numbers in both patterns alternate between odd and even.
C. The numbers in Pattern B are 5 more than the numbers in Pattern A.
D. The numbers in Pattern B are half the numbers in Pattern A.

14 Seven people evenly split five chocolate bars between them. What fraction of chocolate bar will each person get?

A. $\frac{1}{7}$

B. $\frac{5}{7}$

C. $\frac{1}{5}$

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

---

15 What number is two hundred ten and eighty-six thousandths?

A. 210.860
B. 210,086
C. 210.086
D. 210.86

16

Which name(s) can this shape be classified with? Select all the correct answers.

A. Parallelogram
B. Rectangle
C. Square
D. Quadrilateral
E. Rhombus

---

17 What is the correct way to write 250.108 in expanded form?

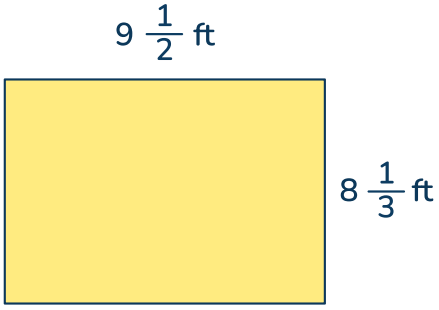
A. $2 \times 100 + 5 \times 10 + 1 \times (\frac{1}{100}) + 8 \times (\frac{1}{1{,}000})$

B. $2 \times 100 + 5 \times 1 + 1 \times 10 + 8 \times (\frac{1}{1000})$

C. $2 \times 100 + 5 \times 10 + 1 \times (\frac{1}{10}) + 8 \times (\frac{1}{1000})$

D. $2 \times (\frac{1}{100}) + 5 \times (\frac{1}{1}) + 1 \times (\frac{1}{10}) + 8 \times (\frac{1}{100})$

18 Muhammad is getting new carpet installed in his bedroom. The diagram below shows the dimensions of his bedroom floor. If the carpet covers the entire floor, what is the area of the carpet?



A. $76\frac{5}{6}$ square feet

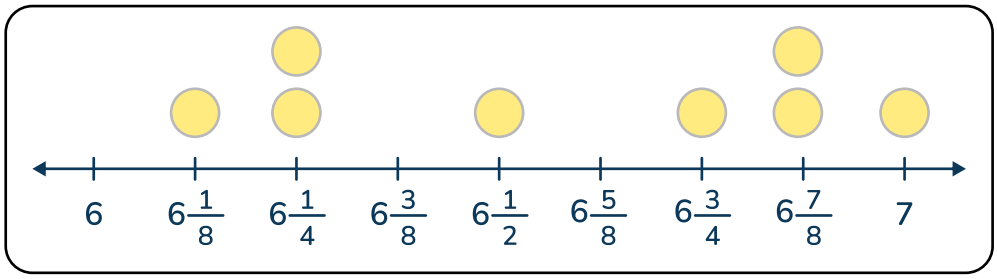
B. $79\frac{1}{6}$ square feet

C. $75\frac{2}{3}$ square feet

D. $72\frac{1}{6}$ square feet

---

19 The line plot below shows the lengths of Parvati's pencils in inches. What is the total length, in inches, of the 3 shortest pencils?



A. $18\frac{3}{8}$ inches

B. 19 inches

C. $18\frac{5}{8}$ inches

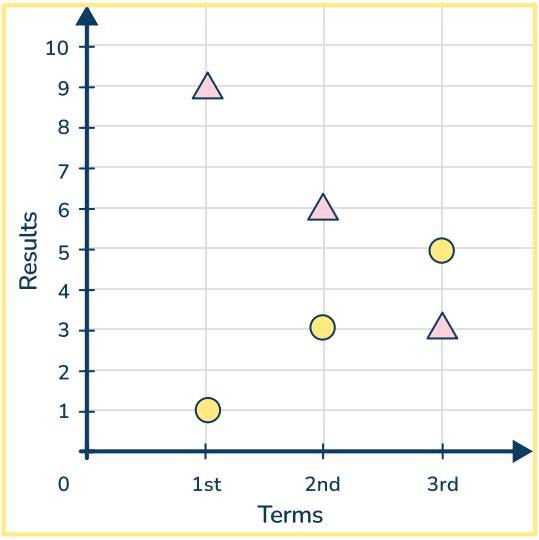
D. $20\frac{3}{4}$ inches

20 The rules for two patterns are below.

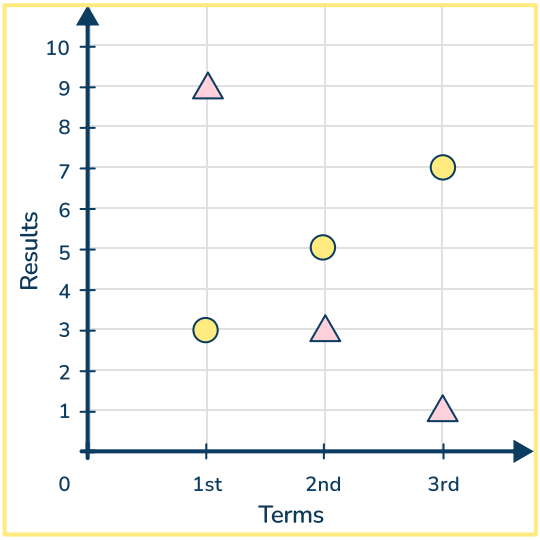
- Pattern A: Start at 3. Add 2.
- Pattern B: Start at 9. Multiply by $\frac{1}{3}$.

In the graphs, the circles represent Pattern A and the triangles represent Pattern B. Which graph is correct?

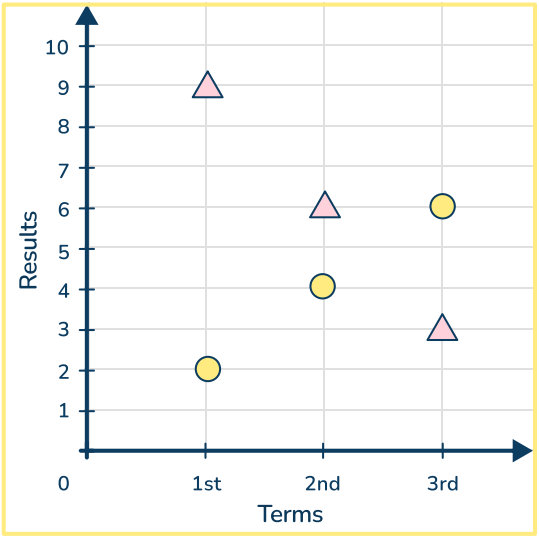
A.



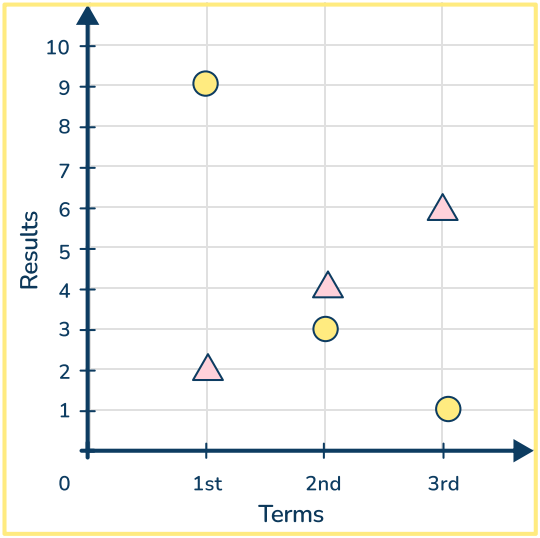
B.



C.



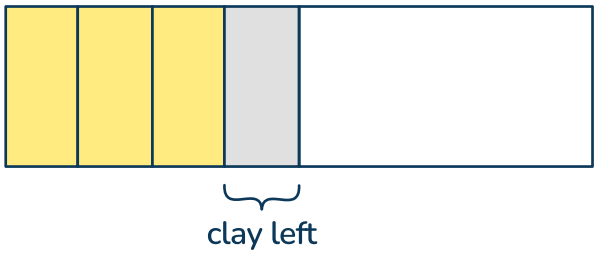
D.



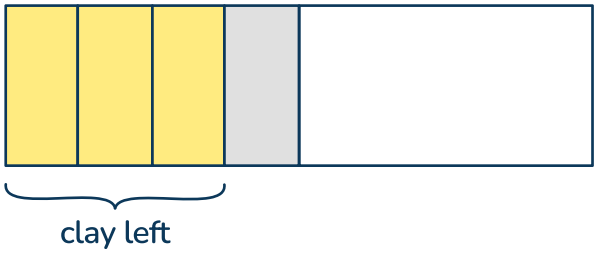
21 Will had $\frac{1}{2}$ of a pound of clay. He used $\frac{3}{4}$ of the clay for a project. To find how much of a pound of sand he has left, Will draws a model that represents 1 pound of clay.

Choose the model that shows the correct model.

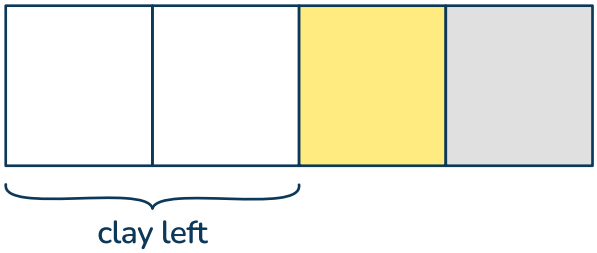
A.



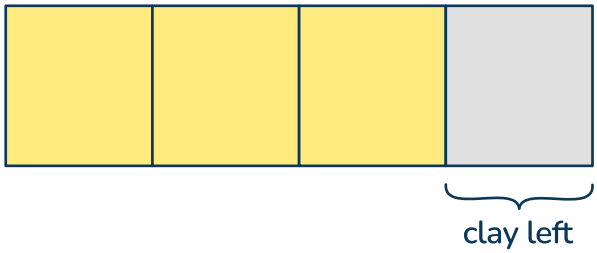
B



C.



D.

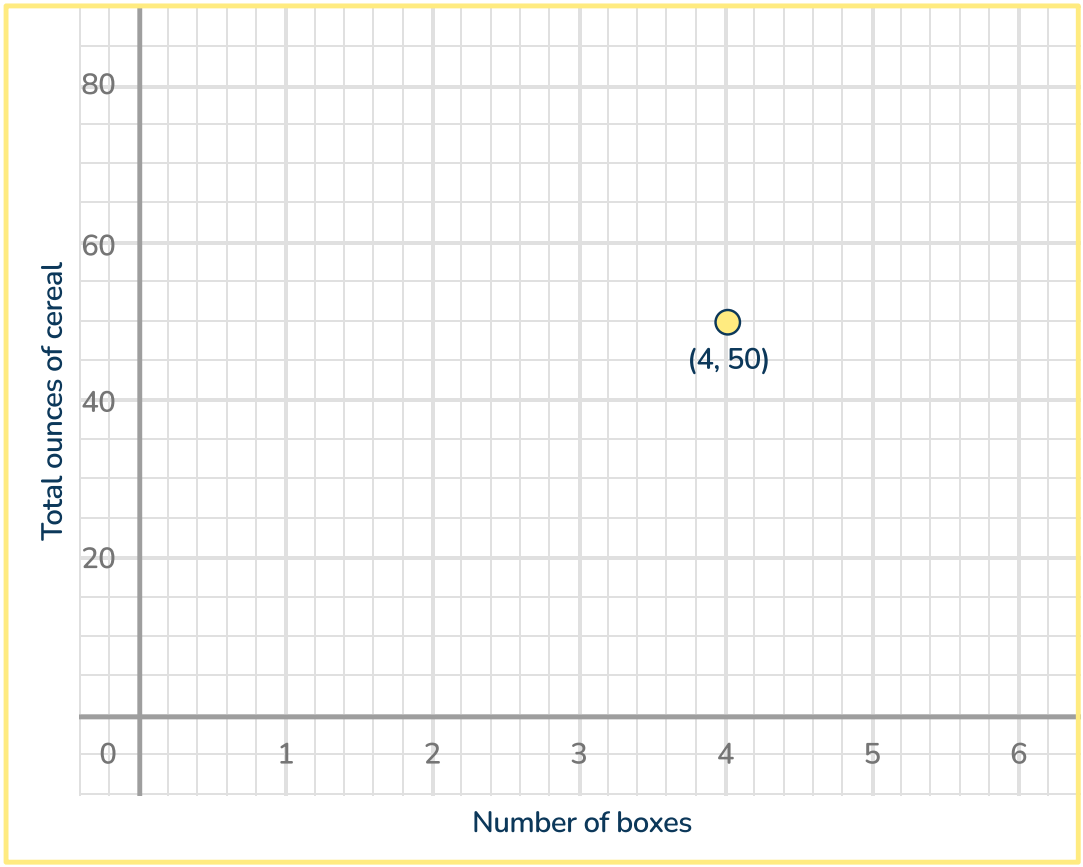


22 Round 9,635.792 to the nearest hundredth.

A. 9,600
B. 9,635.79
C. 9,635.8
D. 9,635.800

---

23 The graph shows the total number of ounces in any number of boxes of cereal.



Which statement correctly explains the meaning of (4, 50) on the graph?

A. Each box of cereal weighs 20 ounces.
B. 50 boxes of cereal weigh 4 ounces.
C. There are 60 ounces in 4 boxes of cereal.
D. 4 boxes of cereal weigh 50 ounces.

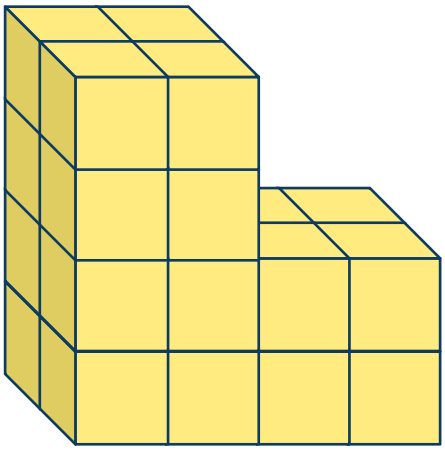
24 Solve the following equation.

$$4(18 \div 6 + 5) - 2 \times 3 + 8$$

A. 18
B. 32
C. 30
D. 34

---

25 The composite shape below is made up of unit cubes. What is the volume, in cubic units, of the composite shape?



A. 18
B. 20
C. 16
D. 24

26 Jared's orchard has 532 apples ready to sell. The apples will be put in boxes of 24 and sold for $6.50 per box. How many full boxes of apples can Jared make?

A. 22 boxes
B. 40 boxes
C. 23 boxes
D. 26 boxes

---

27 Amelia volunteers at a pet store. She helps feed the animals based on the following rules:

- A hamster eats $\frac{3}{4}$ the amount of food as a rat.
- A guinea pig eats $\frac{4}{3}$ the amount of food as a rat.

Based on the information above, which statement is true?

A. A hamster and a guinea pig eat the same amount of food.
B. A guinea pig eats more than a hamster.
C. A hamster eats more than a guinea pig.
D. A guinea pig eats less than a rat.

28 Which shapes always have 4 equal sides? Select all the correct answers.

A. Square
B. Parallelogram
C. Rhombus
D. Rectangle
E. Quadrilateral

---

29 Miranda spent $2\frac{1}{5}$ hours practicing the drums. How many minutes did Miranda spend practicing the drums?

A. 125 minutes
B. 130 minutes
C. 132 minutes
D. 112 minutes

30 Which equation equals 0.05?

A. $5 \times 10^2 = ?$

B. $50 \div 10^3 = ?$

C. $50 \times 10^2 = ?$

D. $5{,}000 \div 10^3 = ?$

---

31 A fruit salad recipe requires $1\frac{1}{3}$ cups of blueberries. How many cups of blueberries would be needed to make $4\frac{1}{2}$ fruit salad recipes?

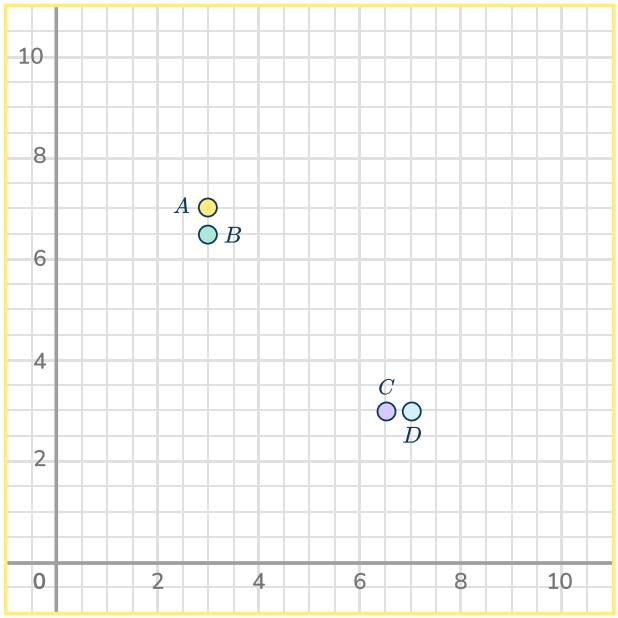
A. $4\frac{1}{6}$ cups

B. 6 cups

C. $5\frac{1}{2}$ cups

D. $6\frac{1}{6}$ cups

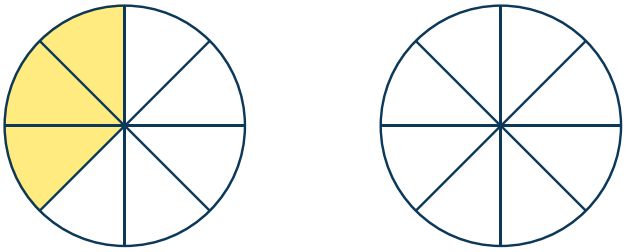
32 Which point shows (3, 7)?



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

---

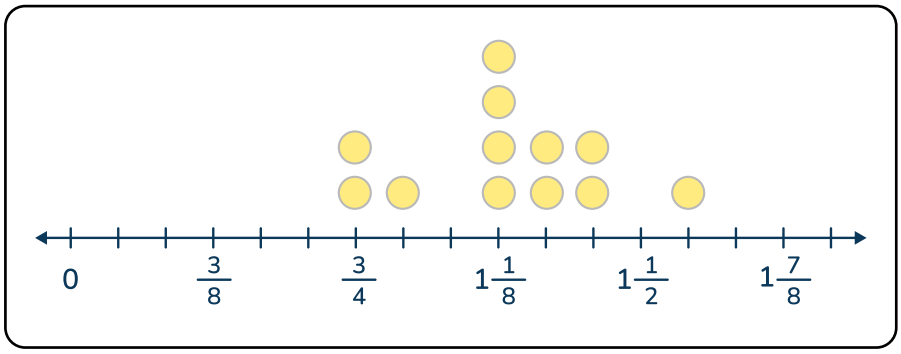
33 Blake and her sister ordered two pizzas for dinner. The shaded part of the circle represents the portion of the pizza Blake's sister ate. Blake ate $\frac{1}{4}$ of a pizza more than her sister.



How much pizza was left over?

A. $\frac{8}{8}$ or 1 whole
B. $\frac{3}{8}$
C. $\frac{1}{8}$
D. $\frac{5}{8}$

34 A class is growing plants for a science experiment. Below is the height of the plants after one week.



What is the difference between the shortest and tallest plants?

A. 2 inch

B. $\frac{7}{8}$ of an inch

C. $1\frac{1}{4}$ inches

D. $\frac{5}{8}$ of an inch

---

35 Story: Yan has $\frac{1}{3}$ of a cup of fish food. He uses it to feed 4 fish equally. How much food does each fish get?

Which expression fits the story context?

A. $\frac{1}{3} \times 4$

B. $4 \times \frac{1}{12}$

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

D. $4 \div \frac{1}{3}$

36 Complete the statement: 60 is ____ times the size of 6,000.

A. 100

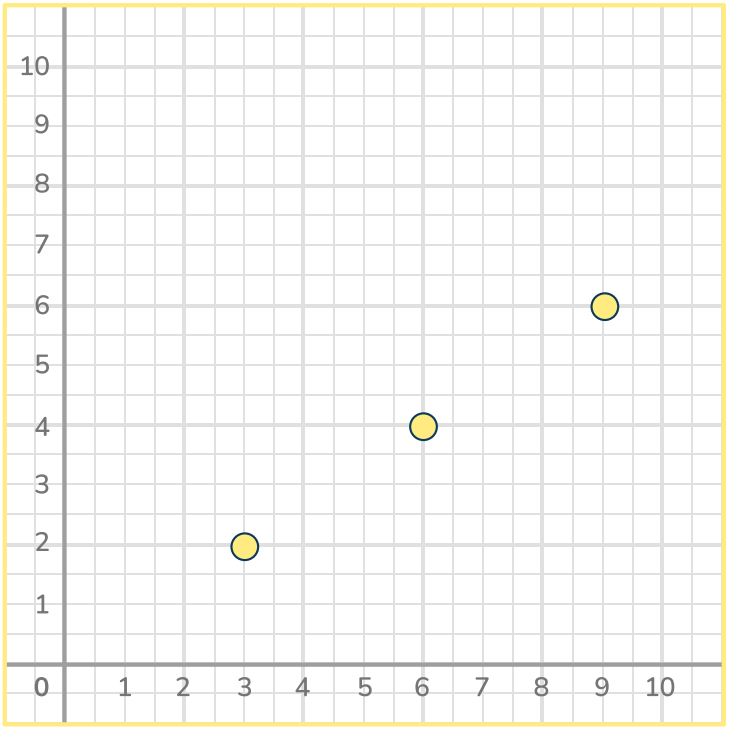
B. $\frac{1}{10}$

C. 10

D. $\frac{1}{100}$

---

37 The graph below shows ordered pairs that make two patterns.



What are the rules for the two patterns shown by the ordered pairs?

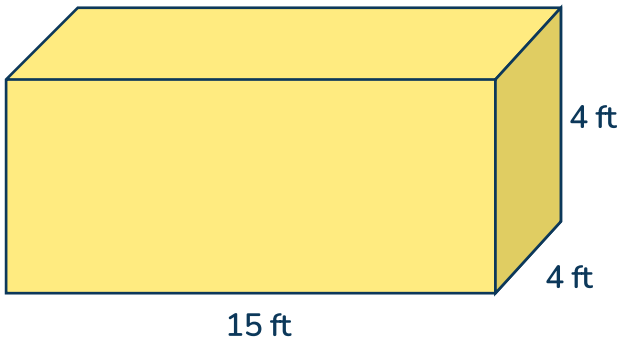
A. x-coordinate: Add 3
y-coordinate: Add 2

B. x-coordinate: Add 2
y-coordinate: Add 3

C. x-coordinate: Multiply by 3
y-coordinate: Multiply by 2

D. x-coordinate: Multiply by 2
y-coordinate: Multiply by 2

38 What is the volume of the rectangular prism?



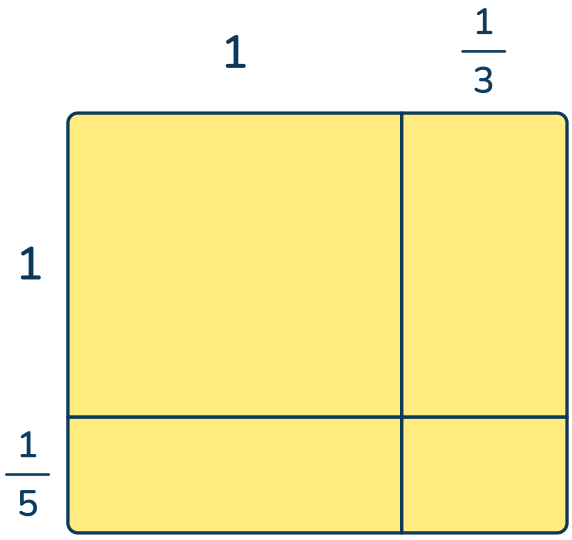
A. 120 square feet
B. 300 cubic feet
C. 220 square feet
D. 240 cubic feet

---

39 How many centimeters are in 0.9 meters?

A. 90 cm
B. 0.09 cm
C. 900 cm
D. 9 cm

40 Diego is solving $1\frac{1}{3} \times 1\frac{1}{5}$. He draws the model below.



Which expression represents Diego's area model?

A. $1 + \frac{1}{3} + \frac{1}{5} + \frac{1}{15}$

B. $2 + 1\frac{1}{3} + 1\frac{1}{5} + 1\frac{1}{15}$

C. $1 + \frac{1}{3} + \frac{1}{5} + \frac{1}{8}$

D. $\frac{1}{15} + \frac{3}{15} + \frac{5}{15} + \frac{8}{15}$

Standard: 5.NBT.3
DOK 3
Short Answer Response - 3 points

41 The height of a plant is approximately 36.2 cm. If the height was rounded to the nearest tenth, what are three possible actual heights of the plant?

Write the three numbers:

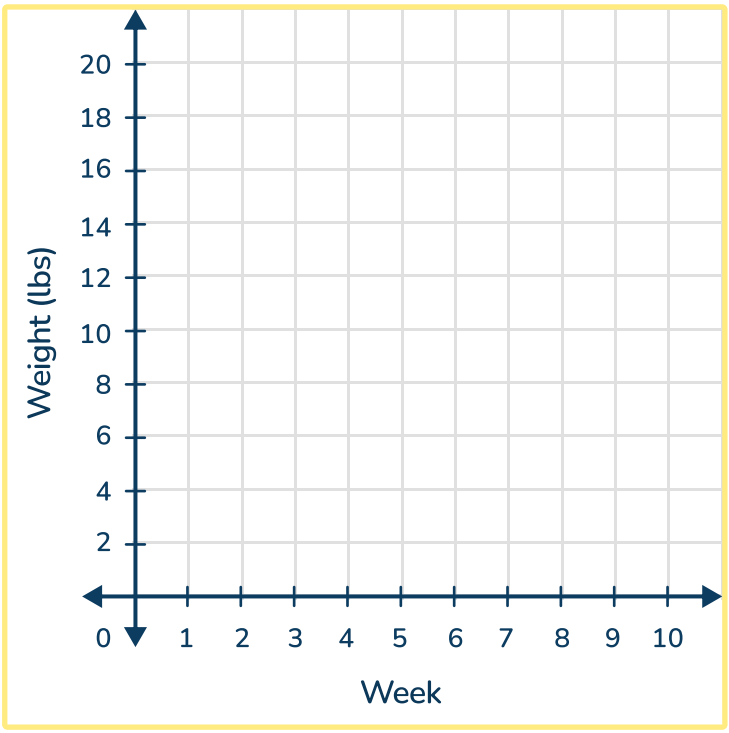
Explain how you solved.

Extended response - 4 points
Standard: 5.G.1, 5.G.2
DOK 3

42 Violet adopted a new puppy and then measured the weight of the puppy each week for ten weeks, rounded to the nearest pound. The table shows the data Violet collected.

Week	1	2	3	4	5	6	7	8	9	10
Weight	6	7	9	10	11	12	15	16	17	18

Part A:
Plot each pair of numbers on the coordinate grid below.



Part B:
Between which two weeks did the puppy make the greatest amount of growth? Use the completed grid to explain how you know.

_____

_____

_____

_____

Extended response - 4 points
Standard: 5.NF.1, 5.NF.2
DOK 3

43 Beckham solved the following equation:

$$\frac{1}{5} + \frac{3}{4} = \frac{4}{9}$$

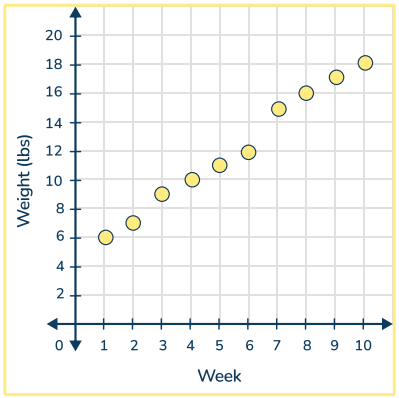
Is Beckham's answer reasonable? Decide without solving (using mental estimation or benchmark fractions to decide) and explain your thinking.

Answer Key - Multiple Choice

Item number	Correct answer	Standard(s)	DOK
1	C	**5.NBT.7**	DOK 2
2	D	**5.MD.1**	DOK 1
3	B, C	**5.NF.5a, 5.NF.5b**	DOK 3
4	A	**5.NBT.5**	DOK 2
5	C	**5.OA.2**	DOK 1
6	D	**5.NF.1, 5.NF.2**	DOK 2
7	A	**5.MD.3a, 5.MD.3b, 5.MD.4, 5.MD.5a 5.MD.5b**	DOK 1
8	B	**5.G.1**	DOK 1
9	D	**5.NF.7.b, 5.NF.7.c**	DOK 2
10	A	**5.NBT.7**	DOK 2
11	C	**5.OA.1**	DOK 1
12	B	**5.NBT.3b**	DOK 2
13	D	**5.OA.3**	DOK 3
14	B	**5.NF.3**	DOK 2
15	C	**5.NBT.3a**	DOK 1
16	A, D	**5.G.3, 5.G.4**	DOK 2
17	C	**5.NBT.3a**	DOK 1
18	B	**5.NF.4b**	DOK 2
19	C	**5.MD.2, 5.NF.1**	DOK 2

Item number	Correct answer	Standard(s)	DOK
20	B	**5.OA.3**	DOK 3
21	A	**5.NF.6**	DOK 2
22	B	**5.NBT.4**	DOK 1
23	D	**5.G.2**	DOK 2
24	D	**5.OA.1**	DOK 1
25	D	**5.MD.5c**	DOK 2
26	A	**5.NBT.6**	DOK 2
27	B	**5.NF.5**	DOK 3
28	A, C	**5.G.3, 5.G.4**	DOK 1
29	C	**5.MD.1**	DOK 2
30	B	**5.NBT.2**	DOK 1
31	B	**5.NF.3, 5.NF.4a, 5.NF.6**	DOK 2
32	A	**5.G.1**	DOK 1
33	A	**5.NF.1, 5.NF.2**	DOK 2
34	B	**5.MD.2**	DOK 2
35	C	**5.NF.7a**	DOK 2
36	D	**5.NBT.1**	DOK 1
37	A	**5.OA.3**	DOK 3
38	D	**5.MD.5b**	DOK 1
39	A	**5.MD.1**	DOK 1
40	A	**5.NF.4b**	DOK 2

Item	KEY	Rationale
41	3 points	To receive 3 points, students need to write three correct numbers and provide a correct explanation that shows decimal place value understanding. (Example answers: 36.15, 36.24, 36.215 etc.)
	2 points	To receive 2 points, students need to write at least 2 correct numbers **AND** provide a correct explanation that shows decimal place value understanding.
	1 point	To receive 1 point, students need to write at least 2 correct numbers **OR** provide a correct explanation that shows decimal place value understanding.
	0 points	Students will receive 0 points if they leave the response blank, or if write two or more incorrect numbers **AND** fail to write a response that shows decimal place value understanding.

Item	KEY	Rationale
42	4 points	In order to receive 4 points, students need to correctly answer **all parts** of Part A **and** Part B. Part B should include a thorough explanation of their answer. **Part A:** Students must recognize that they can create ordered pairs from the data in the table. The ordered pairs are as follows: (1,6) (2,7) (3,9) (4,10) (5,11) (6,12) (7,15) (8,16) (9,17) (10,18) Each ordered pair should be correctly plotted on the coordinate grid.  **Part B:** Students should correctly answer that the puppy made the greatest amount of growth between week 6 and 7. They should also explain that this is shown on the grid as the points make the greatest vertical jump between those two weeks (12 lbs to 15 lbs)
	3 point	In order to receive 3 points, students may answer all parts of Part A and Part B, but they may not have a thorough explanation of how the completed coordinate grid shows the greatest amount of growth between weeks 6 and 7.
	2 point	In order to receive 2 points, students may • make a mistake on Part A, which then causes them to make a math mistake on Part B, as well. (Example: incorrectly plot the points on the graph) • only answer one part correctly. OR • fail to explain in a way that lets the teacher know the student can interpret the completed grid correctly.
	1 point	To receive 1 point, students may get one part of the answer correct (such as plotting the points on the grid).
	0 points	To receive 0 points, the student must leave the answer blank or get no parts of the problem correct.

Item	KEY	Rationale
43	4 points	The student clearly explains that Beckham's answer is not reasonable. Student's response clearly shows fraction number sense, including (but not limited to)... • That $\frac{3}{4}$ is greater than $\frac{1}{2}$ and $\frac{3}{9}$ is less than $\frac{1}{2}$ • Therefore adding $\frac{1}{5}$ to $\frac{3}{4}$ should be more than $\frac{1}{2}$, not less OR • That $\frac{3}{4}$ is $\frac{1}{4}$ away from 1 whole • That $\frac{3}{9}$ is $\frac{6}{9}$ away from 1 whole • Therefore adding $\frac{1}{5}$,will be a sum close to 1 whole, which $\frac{3}{9}$ is not
	3 points	Student explains that Beckham's answer is not reasonable. Student's response clearly shows fraction number sense, including (but not limited to) the examples above, however the student makes 1 mistake or leaves out 1 part.
	2 points	Student states that Beckham's answer is not reasonable. Student's response shows some fraction number sense (correct benchmarks or estimation value for individual fractions), but the student does not connect this to the overall equation or parts of the explanation are unclear.
	1 point	Student's response shows some fraction number sense (correct benchmarks or estimation value for individual fractions), but the student makes 1 or 2 mistakes **AND** parts of the explanation are unclear. **OR** Student explains that Beckham added the denominators when he should have found common denominators, which is not the correct algorithm. However, the student does not give an explanation that shows fraction number sense.
	0 points	The student leaves the response blank. **OR** The student makes more than 2 mistakes when estimating or using fraction benchmarks. **OR** The student's explanation shows little to no fraction number sense.

ANSWERS SORTED BY CCSS STRAND

OA			
Item number	Correct answer	Standard(s)	DOK
5	C	**5.OA.2**	DOK 1
11	C	**5.OA.1**	DOK 1
13	D	**5.OA.3**	DOK 3
20	B	**5.OA.3**	DOK 3
24	D	**5.OA.1**	DOK 1
37	A	**5.OA.3**	DOK 3

NBT			
Item number	Correct answer	Standard(s)	DOK
1	C	**5.NBT.7**	DOK 2
4	A	**5.NBT.5**	DOK 2
10	A	**5.NBT.7**	DOK 2
12	B	**5.NBT.3.b**	DOK 2
15	C	**5.NBT.3.a**	DOK 1
17	C	**5.NBT.3.a**	DOK 1
22	B	**5.NBT.4**	DOK 1
26	A	**5.NBT.6**	DOK 2
30	B	**5.NBT.2**	DOK 1
36	D	**5.NBT.1**	DOK 1
41	Short answer response	**5.NBT.3**	DOK 3

NF			
Item number	Correct answer	Standard(s)	DOK
3	B, C	5.NF.5a, **5.NF.5b**	DOK 3
6	D	**5.NF.1, 5.NF.2**	DOK 2
9	D	5.NF.7.b, **5.NF.7**.c	DOK 2
14	B	**5.NF.3**	DOK 2
18	B	**5.NF.4.b**	DOK 2
21	A	**5.NF.6**	DOK 2
27	B	**5.NF.5**	DOK 3
31	B	5.NF.3, 5.NF.4.a, **5.NF.6**	DOK 2
33	A	5.NF.1, **5.NF.2**	DOK 2
35	C	**5.NF.7a**	DOK 2
40	A	**5.NF.4b**	DOK 2
43	Extended Response	**5.NF.1, 5.NF.2**	DOK 3

MD			
Item number	Correct answer	Standard(s)	DOK
2	D	**5.MD.1**	DOK 1
7	A	5.MD.3a, 5.MD.3b, 5.MD.4, 5.MD.5a **5.MD.5b**	DOK 1
19	C	**5.MD.2, 5.NF.1**	DOK 2
25	D	**5.MD.5.c**	DOK 2
29	C	**5.MD.1**	DOK 2
34	B	**5.MD.2**	DOK 2
38	D	**5.MD.5b**	DOK 1
39	A	**5.MD.1**	DOK 1

G			
Item number	Correct answer	Standard(s)	DOK
8	B	**5.G.1**	DOK 1
16	A, D	**5.G.3,** 5.G.4	DOK 2
23	D	**5.G.2**	DOK 2
28	A, C	**5.G.3,** 5.G.4	DOK 1
32	A	**5.G.1**	DOK 1
42	Extended Response	**5.G.1, 5.G.2**	DOK 3

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/

(929) 298 - 4593

hello@thirdspacelearning.com

THIRD SPACE LEARNING