THIRD SPACE LEARNING

5th Grade Colorado State Practice Math Test

Colorado Practice Test Grade 5

Grade 5

Questions

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

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

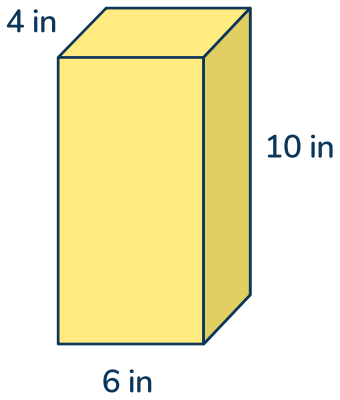
Unit 1
10 questions

Calculators are not permitted.

1 What is the value of $49.6 \div 8$?

A. 6.1
B. 6.2
C. 7.1
D. 7.2

2 What is the volume of the rectangular prism in cubic inches?



Use the box to write your answer:

Answer

3 Nikki is building a rectangular billboard for her senior project. The billboard is 15 feet wide and 9 feet long.

Part A:
Write an equation that represents the area of Nikki's billboard. In your equation, let b represent the area of Nikki's billboard. Then solve your equation. Use the space below to enter your answer.

Answer

Part B:
Nikki is making a border to go around the billboard. This border will be placed along the edge, except where there is a 3 ft figure in one of the corners.
The material she is using to make the border costs $2 for one foot.
Write an expression that represents the total cost of the border.
Explain how you found your expression.
Use the space below to write your expression and your explanation.

Answer

Part C:
Use your expression from Part B to find the total cost, in dollars, of the border.

Answer

4 Dylan is in a woodshop class and has 6 pieces of wood that are $\frac{2}{3}$ foot wide. He multiplies the numerator and denominator of $\frac{2}{3}$ by 6 and determines the total width of the 6 pieces of wood is $\frac{12}{18}$ foot.

$6 \times \frac{2}{3} = \frac{6 \times 2}{6 \times 3} = \frac{12}{18}$

- Explain the mistake that Dylan made
- Explain how to find the correct total width, in feet, of the 6 pieces of wood.
- What is the correct total width of the pieces of wood?

Enter your explanations and answer in the box below.

Answer

5 Select the option that makes this true.

The value of the 7 in 57.854 is _____the value of the 7 in 54.078

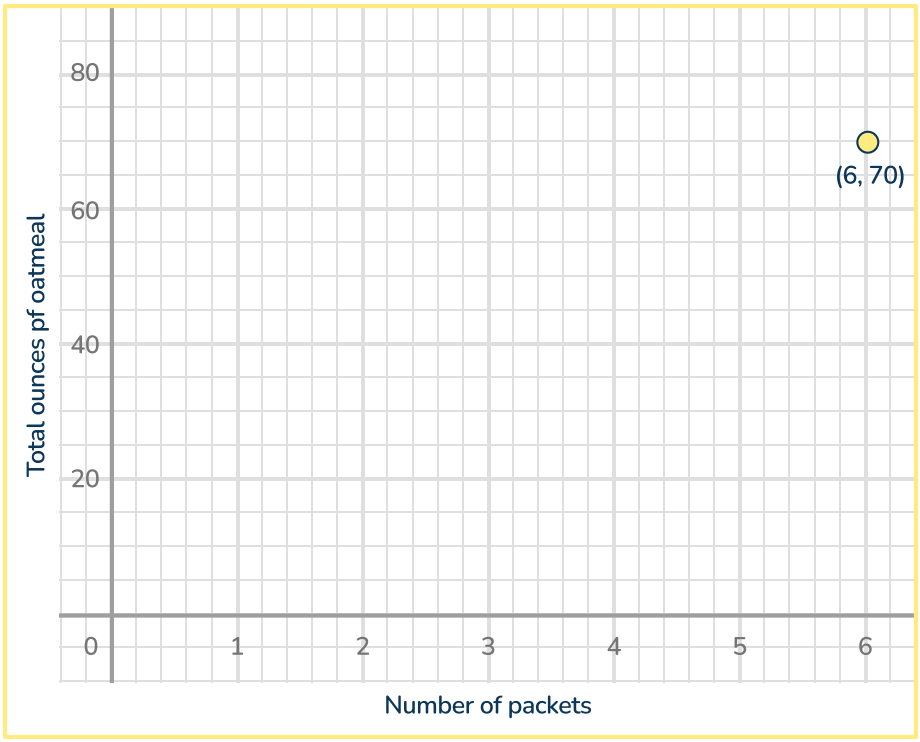
A. 10 times

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

C. 100 times

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

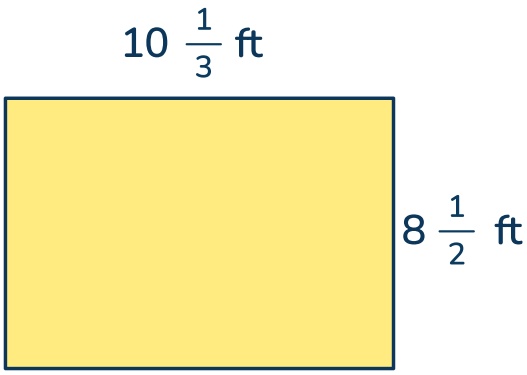
6 The graph shows the total number of ounces in any number of packets of oatmeal.



Select the statement that correctly explains the meaning of (6, 70) on the graph.

A. Each packet of oatmeal is 20 ounces.
B. 6 packets of oatmeal weigh 70 ounces.
C. 70 packets of oatmeal have 6 total ounces.
D. There are 72 ounces in 6 packets of oatmeal.

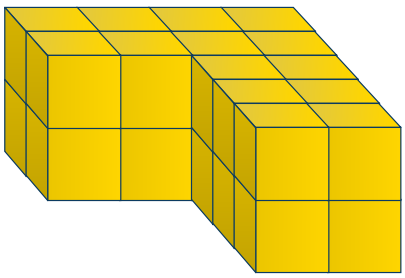
7 Muhammad is getting new carpet installed in his bedroom. The diagram below shows the dimensions of his bedroom floor. If the carpet covers the entire floor, find the area of the carpet.



Use the space below to show your work and answer.

Answer

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



Enter your answer in the space provided.

Answer

9 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

Part A:

How much would it cost to buy 2 watermelons and 3 bunches of bananas?

Use the space to write your answer and show your work.

Answer

Part B:

If you have $11, will you have enough money to buy 1 watermelon and 1 avocado?

Provide an explanation in the box below.

Answer

10 Find the solution:

$3(12 \times 6 + 8) - 4 \div 2 + 2$

A. 240
B. 120
C. 236
D. 118

Unit 2
8 questions

Calculators are not permitted.

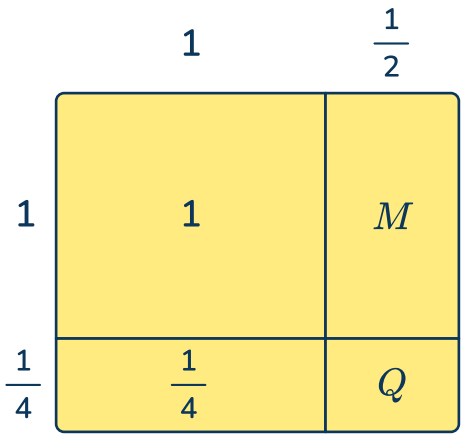
1 Jayson volunteers at a zoo. He helps feed the animals based on the following rules.

- A lion eats $\frac{2}{3}$ the amount of food as a tiger.
- A cheetah eats $\frac{3}{2}$ the amount of food as a tiger.

Based on the information above, which statement is true?

A. A cheetah and a lion eat the same amount of food.
B. A lion eats more than a tiger.
C. A cheetah eats less than a lion.
D. A lion eats less than a cheetah.

2 Diego is solving $1\frac{1}{2} \times 1\frac{1}{4}$. He draws the model below.



Part A:

Determine the number that each letter in the model represents and explain each of your answers.

Answer

Part B:

Write an expression representing the area.

Answer

Part C:

Find the product.

Answer

3 Which numbers are needed to complete the expression below so that it has a value of 15?

5 6 8 14

(8 + ?) + ? ÷ (12 - 5)

Show your work and write you answer in the space below.

Answer

4 Solve and enter your answer in the box.

$\frac{2}{3} + \frac{5}{2} - \frac{1}{4}$

Answer

5 Emma wrote down two patterns.

Pattern A: 0, 12, 24, 36, 48, 60...
Pattern B: 0, 4, 8, 12, 16, 20...

Which statement correctly compares Emma's 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 8 more than the numbers in Pattern A.
D. The numbers in Pattern A are 3 times the numbers in Pattern B.

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6 Camilla found the product of 327 and 43. Her work is shown below. Her teacher was unable to read one of the numbers in her work. What number belongs in the box where the number the teacher can't read is?

			1	2 2	
			3	2	7
		×		4	3
			1 9	8	1
+	1	1 3,		8	0
	1	4,	0	6	1

Place your answer in the box below.

Answer

7 Noah built a new garden bed in his backyard. He needs to fill it with $10\frac{1}{4}$ cubic yards of soil. He has already poured in $7\frac{5}{12}$ cubic yards of soil. How much more soil does he need to pour in to fill the garden bed? Answer in lowest terms. Place the answer in the box below.

Answer

8 There are two lizard tanks in Mr. Teasley's science classroom, Tank A and Tank B. Each tank has two sections.

Part A:

One section of Tank A has a volume of 28 cubic feet. The volume of the other section of Tank A has a volume of 102 cubic feet. What is the total volume, in cubic feet, of Tank A?

Answer

Part B:

Tank B has the same volume as Tank A. The volume of one section of Tank B is 68 cubic feet. What is the volume in cubic feet of the other section of Tank B?

Answer

Unit 3
9 questions

Calculators are not permitted.

1 Four chocolate bars are shared equally between 5 people. Write a fraction representing the amount of each chocolate bar each person will get.

Place your answer in the box below.

Answer

2 Part A:
Enter your answer in the space provided.

7.2 x 0.1 = _____

Part B:
Enter your answer in the space provided.

7.2 ÷ 0.1 = _____

3 **Part A:**

Which amount listed below is greater than five hundred thirty-seven and sixty-eight hundredths?

A. Five hundred thirty-seven and fifty-eight hundredths
B. Five hundred thirty-seven and sixty hundredths
C. Five hundred thirty-seven and sixty-nine hundredths
D. Five hundred thirty-seven and sixty-one hundredths

Part B:

What is five hundred thirty-seven and sixty-eight hundredths rounded to the nearest tenth?

Enter your answer in the box below.

Answer

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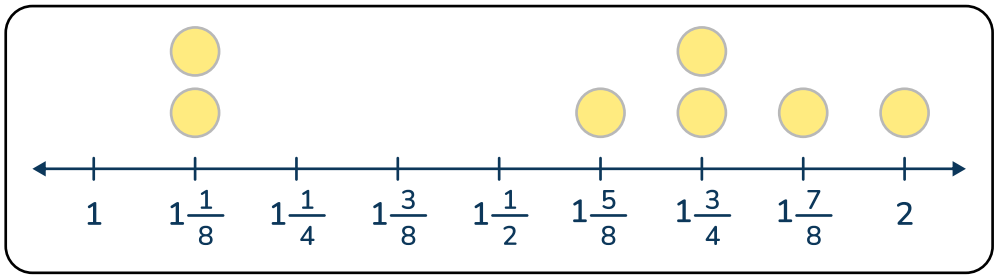
4 A certain fraction is greater than 0 and less than 1. When that fraction is multiplied by 3, which point(s) on the number line could be the answer? Select all the correct answers.

A. Point U
B. Point V
C. Point W
D. Point X
E. Point Y

5 The line plot below shows the heights of Jamal's plants in inches.



Part A:

What is the total height, in inches, of the 3 shortest plants? Use the space below to show your work.

Answer

Part B:

What is the difference, in inches, between the tallest plant and the shortest plant? Use the space below to show your work.

Answer

6 Yeva and her 3 friends go out to eat at a restaurant. At the end of the meal, the total bill is $72.36. They decide to split the bill equally. How much will each friend pay?

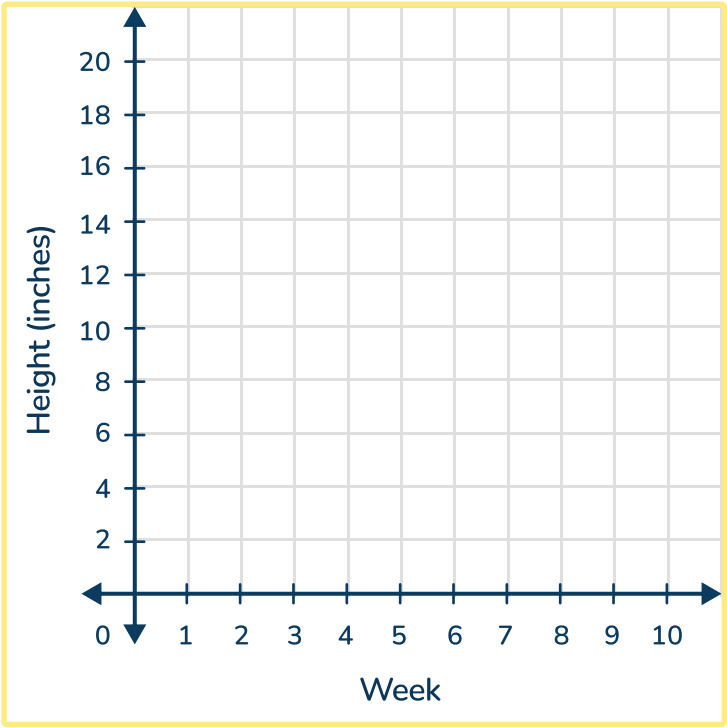
A. $289.44
B. $24.12
C. $18.09
D. $217.08

7 A farmer planted a seed and then measured the height of the plant each week for ten weeks, rounded to the nearest inch. The table shows the data the farmer collected.

Week	1	2	3	4	5	6	7	8	9	10
Height	1 in.	2 in.	4 in.	5 in.	7 in.	11 in.	13 in.	14 in.	15 in.	16 in.

Part A:

Plot each pair of numbers on the coordinate grid below.

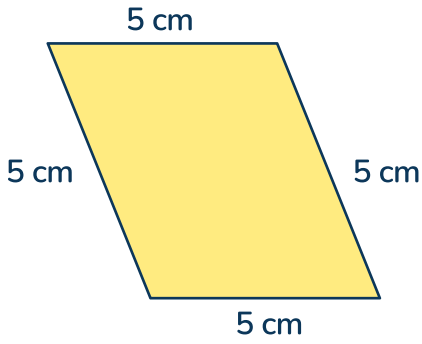


Part B:

Between which two weeks did the plant make the greatest amount of growth? Use your graph to explain.

Answer

8 Select all the names that the shape can be classified as:



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

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9 Which expression represents the statement, “The sum of 6 and 7 subtracted from 20”

A. 20 - 6 + 7
B. 20 + 6 + 7
C. (20 - 6) + 7
D. 20 - (6 + 7)

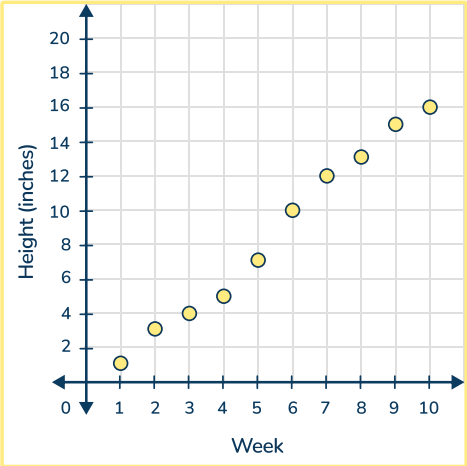
Answer Key - Multiple Choice

Unit 1			
Item number	Correct answer	Standard(s)	DOK
1	B	**5.NBT.B.7**	DOK 1
2	240 in³	**5.MD.C**	DOK 1
3	**Part A**: $b = 15 \times 9$ $b = 135$ **Part B**: $2 times the amount of feet cost = 2 x 48 **Part C**: $96 for the border	**5.OA.A.2** **5.NF.B.4b**	DOK 3
4	Dylan should have only multiplied the numerator by 6 not both the denominator and numerator. This is because a whole number has a denominator of 1. The correct way to multiply a whole number by a fraction is: $\frac{6}{1} \times \frac{2}{3} = \frac{12}{3} = 4$ 4 ft total in width	**5.NF.B.6**	DOK 3
5	C	**5.NBT.A.1**	DOK 2
6	B	**5.G.A.2**	DOK 2
7	$10\frac{1}{3} \times 8\frac{1}{2} = 87\frac{5}{6}$ $87\frac{5}{6}$ square feet	**5.NF.B.4**	DOK 1
8	28 square units	**5.MD.C.4**	DOK 2

Unit 1			
Item number	Correct answer	Standard(s)	DOK
9	**Part A:** 2 x 9.87 = 19.74 (watermelon) 3 x 0.72 = 2.16 (bunches of bananas) 19.74 + 2.16 = 21.90 $21.90 **Part B:** $9.87 (watermelon) $1.29 (avocado) 9.87 + 1.29 = 11.16 The cost is $11.16 – so no you will not have enough money because you only have $11	**5.NBT.B.7**	DOK 3
10	A	**5.OA.A.1**	DOK 1

Unit 2			
Item number	Correct answer	Standard(s)	DOK
1	D	**5.NF.B.5**	DOK 2
2	Part A: M = $\frac{1}{2}$ Q = $\frac{1}{8}$ Part B: Area = $1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8}$ Part C: $1\frac{7}{8}$	**5.NF.B.4**	DOK 3

Unit 2			
Item number	Correct answer	Standard(s)	DOK
3	5 and 14 (8 + 5) + 14 ÷ (12 - 5) = 15	**5.NBT.B.7**	DOK 1
4	$\frac{2}{3} + \frac{5}{2} - \frac{1}{4} = \frac{35}{12}$ or $2\frac{11}{12}$	**5.NF.A.1**	DOK 1
5	D	**5.OA.B.3**	DOK 2
6	0	**5.NBT.B.5**	DOK 1
7	$2\frac{5}{6}$	**5.NF.B.4**	DOK 2
8	**Part A:** 28 + 102 = 130 cubic ft **Part B:** 130 - 68 = 62 cubic ft	**5.MD.C.5**	DOK 2
Unit 3			
Item number	Correct answer	Standard(s)	DOK
1	$\frac{4}{5}$	**5.NF.B.3**	DOK 2
2	**Part A:** 0.72 **Part B:** 72	**5.NBT.A.2**	DOK 1
3	**Part A:** C **Part B:** 537.7	**5.NBT.A.3** **5.NBT.A.4**	DOK 2
4	B, C, D	**5.NF.B.3**	DOK 2
5	**Part A:** $1\frac{1}{8} + 1\frac{1}{8} + 1\frac{5}{8} = 3\frac{7}{8}$ **Part B:** $2 - 1\frac{1}{8} = \frac{7}{8}$	**5.MD.B.2**	DOK 2

Unit 3			
Item number	Correct answer	Standard(s)	DOK
6	C	**5.NBT.B.7**	DOK 2
7	Students must recognize that they can create ordered pairs from the data in the table. The ordered pairs are as follows: (1,1) (2,3) (3,4) (4,5) (5,7) (6,10) (7,12) (8,13) (9,15) (10,16) Each ordered pair plotted on the coordinate grid.  **Part B:** The plant made the greatest amount of growth between week 5 and 6. This is shown on the grid as the points make the greatest vertical jump between those two weeks (7 inches to 10 inches)	**5.G.A.1** **5.G.A.2**	DOK 3
8	A, D, E	**5.G.B.3**	DOK 2
9	D	**5.OA.A.2**	DOK 2

Breakdown of Assessment by domain				
Operations and Algebraic thinking (OA)	Number and Operations in Base Ten (NBT)	Number and Operations - Fractions (NF)	Measurement and Data (MD)	Geometry (G)
17%	27%	30%	13%	13%

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