THIRD SPACE LEARNING

5th Grade Ohio State Practice Math Test

Ohio Practice Test Grade 5

Grade 5

Questions

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

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

Standard: 5.NF.6
DOK 2

1 The fifth graders are having a candy sale as a fundraiser. Homeroom 1 sold $8\frac{4}{5}$ cases of candy. Homeroom 2 sold $\frac{3}{4}$ as many cases of candy as Homeroom 1. How many cases of candy did Homeroom 2 sell?

Answer:_____

Standard: 5.NBT.2
DOK 1

2 What is 5.62×10^6 ?

Answer:_____

Standard: 5.NBT.4

DOK 1

3 Select two numbers that round to be 7.2 when rounded to the nearest tenth.

- ☐ 7.11
- ☐ 7.02
- ☐ 7.17
- ☐ 7.22
- ☐ 7.09

Standard: 5.NF.7

DOK 2

4 Jill plans on running 5 miles at the local track. One time around the track is $\frac{1}{4}$ of a mile. How many times around the track will Jill have to run?

Answer:_____

Standard: 5.NBT.2
DOK 3

5 What number will be in the tens place after 7,562 is divided by 100?

Answer:_____

Standard: 5.NF.7.a
DOK 1

6 Find the value of $7 \div \frac{1}{7}$.

Answer:_____

Standard: 5.NBT.6
DOK 1

7 What is the value of the expression 368 ÷ 16 ?

Answer:_____

Standard: 5.G.1
DOK 1

8 Point B is located 7 units to the right of the origin and 4 units up on the coordinate plane. What is the ordered pair of point B?

Answer:_____

Standard: 5.NBT.7.b

DOK 2

9 The local competitive cheerleading gym raised $5675 for nationals. The mini team raised $\frac{1}{100}$ of the total amount. How much did the mini team raise?

Answer:_____

Standard: 5.G.4

DOK 2

10 Select the statement that is always true.

- ☐ A rhombus is always a square.
- ☐ A square is always a parallelogram.
- ☐ A parallelogram is always a square.
- ☐ A rectangle is always a rhombus.

Standard: 5.NF.5.b
DOK 3

11 In the table below, check off the values of a that makes each of the inequalities true.

	2	3	4
$345 \times \frac{a}{3} > 345$			
$567 \times \frac{a}{4} > 567$			
$269 \times \frac{3}{a} > 269$			

Standard: 5.NBT.3
DOK 2

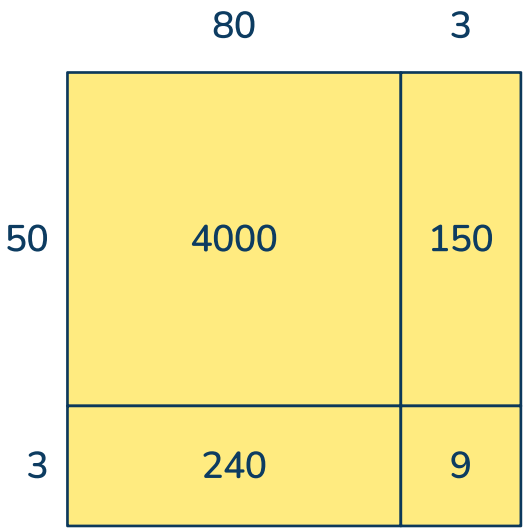
12 Select the expression that is equal to 62.053

- ☐ $60 + 20 + \frac{5}{100} + \frac{3}{1000}$
- ☐ $60 + 2 + \frac{5}{10} + \frac{3}{100}$
- ☐ $60 + 2 + \frac{5}{100} + \frac{3}{1000}$
- ☐ $60 + 20 + \frac{5}{10} + \frac{3}{100}$

Standard: 5.NBT.6

DOK 2

13 Select the division problem that can be used based on the area model below.



- [ ] 4000 ÷ 53
- [ ] 4000 ÷ 83
- [ ] 4240 ÷ 83
- [ ] 4399 ÷ 83

Standard: 5.OA.1

DOK 3

14 Simon evaluates the expression below. Which step shows Simon's first mistake?

$\frac{3}{5}$ x (20 ÷ 5 + 6) - 3

- Step 1: $\frac{3}{5}$ x (4 + 6) - 3
- Step 2: $\frac{3}{5}$ x 10-3
- Step 3: $\frac{3}{5}$ x 7
- Step 4: $\frac{21}{5}$
- Step 5: $\frac{21}{5} = 4\frac{1}{5}$

Answer

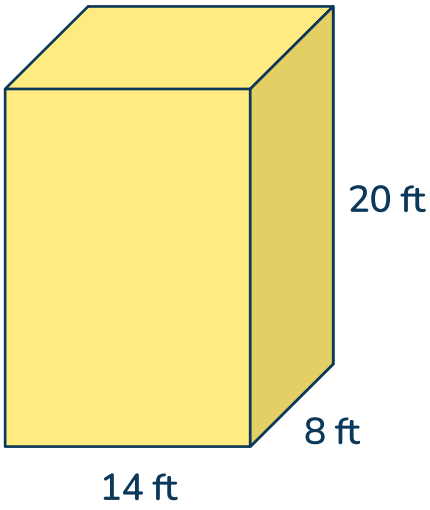
Standard: 5.NBT.7.c
DOK 2

15 Xavier's backyard is in the shape of a rectangle and has an area of $572.4yd^2$. If the width of the backyard is 26.5 yards, select the value of the length of the backyard.

- ☐ 21 yards
- ☐ 21.6 yards
- ☐ 20.6 yards
- ☐ 20 yards

Standard: 5.MD.5.a
DOK 1

16 A rectangular box has the given dimensions. What is the volume in cubic feet?



Answer:_____

Standard: 5.NBT.7
DOK 3

17 Nikki is making a STEM project with wire. She has 4 pieces of wire that are each 1.15 feet long. She has 7 pieces of thicker wire that are each 1.75 feet long. If she uses all 11 pieces of wire for her project, what is the total length of wire in feet?

Answer

Standard: 5.NF.2
DOK 3

18 Syria makes a 1 pound snack mix for her hike using dried bananas, M & M's and peanuts. The list below shows how many pounds of M & M's and peanuts she uses.

- $\frac{3}{7}$ pound of M & M's
- $\frac{1}{5}$ pound of peanuts

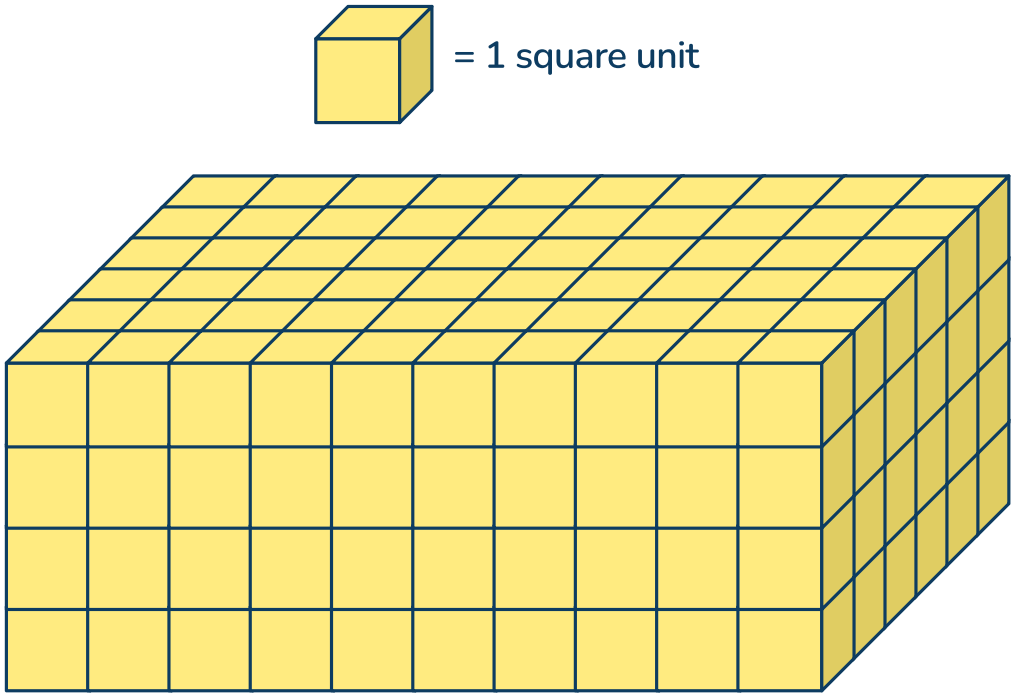
How much dried bananas, in pounds, does Syria use?

Answer

Standard: 5.MD.4

DOK 2

19 Donny created the figure below. What is the volume of his creation?



Answer:_____

Standard: 5.OA.1

DOK 3

20 Select the missing operation in the problem below.

$$24 \div (3 \ ? \ 2) = 4$$

- ☐ ÷
- ☐ x
- ☐ +
- ☐ -

Standard: 5.OA.3 & 5.G.3

DOK 3

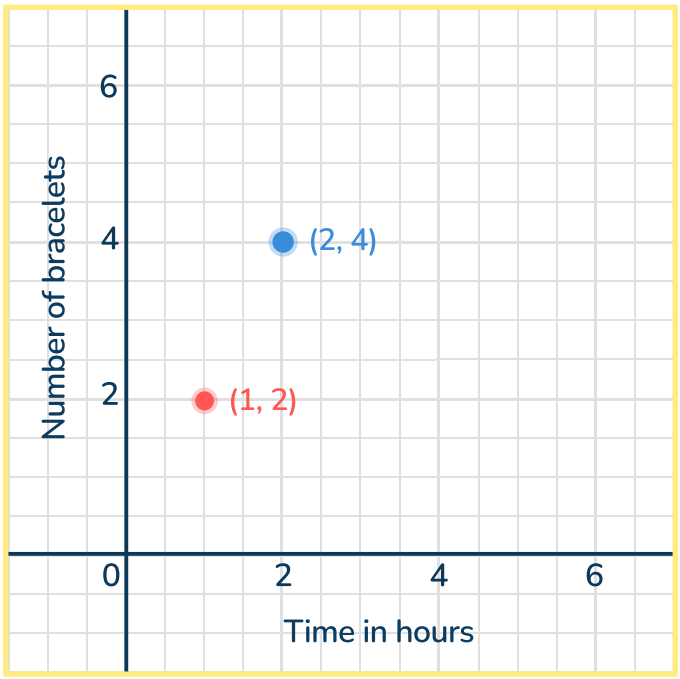
21 The graph below shows the time in hours it takes Travis to make bracelets. Use the graph below to answer the questions.

A. How many bracelets can he make in 2 hours?

Answer:_____

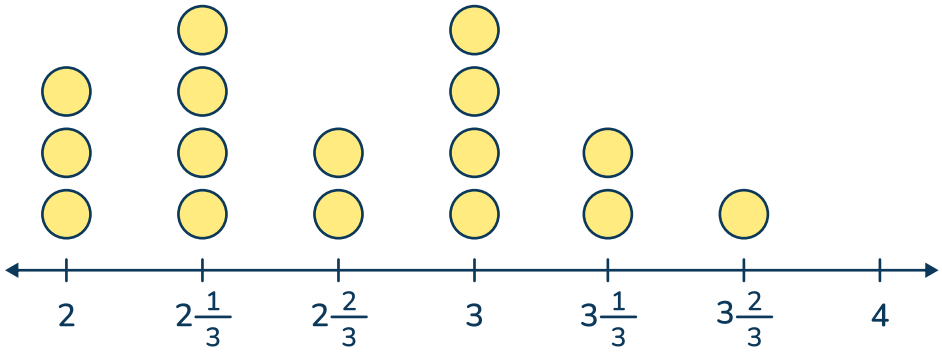
B. How many hours do you think it will take him to make 8 bracelets?

Answer:_____



Standard: 5.MD.2
DOK 3

22 The line plot below shows the lengths of 16 pieces of yarn Joanna cut to use for an art project. What is the total length of yarn she uses?



Length of yarn in feet

Answer:_____

Standard: 5.OA.2
DOK 2

23 Noreen has 3 lop bunnies. She feeds each of them 2 bowls of lettuce 4 times a day. Write an expression that can be used to show the amount of bowls of lettuce she gives her bunnies in a day.

Answer:_____

Standard: 5.NF.4.b
DOK 1

24 What is the area of the rectangle below?

$7\frac{2}{3}$ inches

$12\frac{3}{5}$ inches

Answer:_____

Standard: 5.NF.7.c
DOK 2

25 Dina is building a ramp. She cuts an 8-foot-long piece of wood into sections that are each $\frac{1}{5}$ foot long. How many sections of wood will Dina have when she is finished cutting?

Answer:_____

Standard: 5.NF.1
DOK 2

26 An equation is shown below. What is the missing number?

$2\frac{1}{6} - \frac{?}{12} = \frac{19}{12}$

Answer:_____

Standard: 5.NF.6, 5.NF.7.c
DOK 3

27 Royal's three friends, Denny, Mike, and Kevin, want to borrow paint from him. Royal only has a $2\frac{3}{4}$ gallons of paint to share. He gives Denny $1\frac{1}{4}$ gallons and shares the remaining paint equally between Mike and Kevin. How much paint does Mike and Kevin get each?

Answer

Standard: 5.OA.1
DOK 3

28 A student uses order of operations to solve the equation below. Identify the mistake the student made and correct it.

[3 x (4 + 17) - 5] + [14 - (6 - 2)] = ?

[3 x (21) - 5] + [14 - 4] =

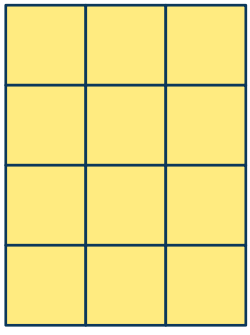
[3 x 16] + [10] =

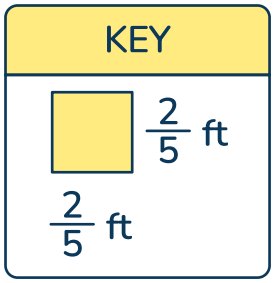
48 + 10 = 58

Answer

Standard: 5.NF.4.b
DOK 3

29 A small portion of London's table is covered with square tiles that are $\frac{2}{5}$ foot by $\frac{2}{5}$ foot. The diagram below shows the part of the table covered by these tiles. Find the area.





Standard: 5.NBT.6

DOK 3

30 Millersville Elementary School has 624 students. Out of the 624 students 117 of them walk home and the rest take the bus. If a bus holds 48 students, how many buses does Millersville Elementary School need?

Answer

Rationales

Item	KEY	Rationale
1	$6\frac{3}{5}$ cases	$8\frac{4}{5} \times \frac{3}{4} = \frac{44}{5} \times \frac{3}{4} = \frac{132}{20} = 6\frac{3}{5}$ cases

Item	KEY	Rationale
2	5,620,000	$5.6 \times 10^6 = 5.6 \times 1{,}000{,}000 = 5{,}600{,}000$

Item	KEY	Rationale
3	7.17 7.22	7.11 rounds to 7.1 7.02 rounds to 7.0 7.17 rounds to 7.2 7.22 rounds to 7.2 7.09 rounds to 7.1

Item	KEY	Rationale
4	20 times	$5 \div \frac{1}{4} = 5 \times \frac{4}{1} = 5 \times 4 = 20$

Item	KEY	Rationale
5	5	7562 ÷ 100 = 75.62 The digit 5 is in the tens place.

Item	KEY	Rationale
6	49	$7 \div \frac{1}{7} = 7 \times \frac{7}{1} = 7 \times 7 = 49$

Item	KEY	Rationale
7	23	368 ÷ 16 = 23

Item	KEY	Rationale
8	(7, 4)	The origin is at (0, 0) where the coordinate is 0 and the coordinate is 0. Moving 7 units right means to add 7 to the coordinate of 0. Moving 4 units up means to add 4 to the coordinate of 0 This gives the coordinate (7, 4). You can also count this out on the coordinate plane.

Item	KEY	Rationale
9	$56.75	Multiply the total amount raised by $\frac{1}{100}$ $5675 \times \frac{1}{100} = 56\frac{75}{100} = 56.75$ $56.75

Item	KEY	Rationale
10	A square is always a parallelogram.	Squares are special parallelograms so will always possess the properties of a parallelogram.

Item	KEY	Rationale
11	345 x > 345 → 4 only 567 x < 567 → 2 and 3 269 x > 269 → 2 only	For the inequality, $345 \times \frac{a}{3} > 345$, the fraction that is multiplied to 345 has to be greater than 1 in order for the product to be greater than 345. Substituting 4 for a will make the fraction greater than 1. For the inequality, $567 \times \frac{a}{4} < 567$, the fraction that is multiplied to 567 has to be less than 1 in order for the product to be less than 567. Substituting 2 and 3 for a will make the fraction less than 1. For the inequality, $269 \times \frac{3}{a} > 269$, the fraction that is multiplied to 269 has to be greater than 1 in order for the product to be greater than 269. Substituting 2 for a will make the fraction greater than 1.

Item	KEY	Rationale
12	$60 + 2 + \frac{5}{100} + \frac{3}{1000}$	62.053 is 60 plus 2 plus 5 hundredths plus 3 thousandths. $62.053 = 60 + 2 + \frac{5}{100} + \frac{3}{1000}$

Item	KEY	Rationale
13	4399 ÷ 83	From the area model, 83 x 53 = 4399. So, the division problem that makes sense from that model is 4399 ÷ 83. The quotient of that problem is equal to 53.

Item	KEY	Rationale
14	Step 3	Do the division first in the parenthesis: $\frac{3}{5}$ x (20 ÷ 5 + 6) - 3 Then add the numbers in the parenthesis: $\frac{3}{5}$ x (4 + 6) - 3 Then multiply: $\frac{3}{5}$ x 10 - 3 Then subtract: 6-3 3 is the correct answer. Simon subtracted 3 from 10 in step 3 instead of multiplying by $\frac{3}{5}$

Item	KEY	Rationale
15	21.6 yards	*Area = length* x *width* 572.4 = 26.5 x *width* 572.4 ÷ 26.5 = *width* 572.4 ÷ 26.5 = 21.6

Item	KEY	Rationale
16	2240 ft³	$V = l \times w \times h$ V = 8 x 14 x 20 V = 2240

Item	KEY	Rationale
17	16.85 feet	4 x 1.15 = 4.6 7 x 1.75 = 12.25 4.6 + 12.25 = 16.85

Item	KEY	Rationale
18	$\frac{13}{35}$ pounds of dried bananas	$\frac{3}{7} + \frac{1}{5} = \frac{15}{35} + \frac{7}{35} = \frac{22}{35}$ $1 - \frac{22}{35} = \frac{35}{35} - \frac{22}{35} = \frac{13}{35}$

Item	KEY	Rationale
19	240 units³	*Volume = length x width x height* *There are 10 cubes for the length, 6 cubes for the width and 4 cubes for the height.* *Volume = 10 x 6 x 4* *Volume = 240 units³*

Item	KEY	Rationale
20	x	Multiplication is the operation that is missing. 24 ÷ (3 x 2) = 4 24 ÷ 6 = 4

Item	KEY	Rationale
21 A	4 bracelets	The ordered pairs represent the hours it takes to make the bracelet and the amount of bracelets. So, the point (2, 4) represents 2 hours to make 4 bracelets.
21 B	4 hours	If the point that represents 8 bracelets were to be graphed, it would be the point (4, 8). The pattern between the x coordinate and the y coordinate is that x is half of y. Also, the points should line up. The point (4, 8) would line up with the other points graphed.

Item	KEY	Rationale
22	43 feet	$2(3) + 4\,(2\frac{1}{3}) + 2(2\frac{2}{3}) + 4(3) + 2(3\frac{1}{3}) + 1(3\frac{2}{3})$ $6 + \frac{28}{3} + \frac{16}{3} + 12 + \frac{20}{3} + \frac{11}{3}$ $\frac{75}{3} + 18$ $25 + 18 = 43$

Item	KEY	Rationale
23	3 x 2 x 4	There are 3 bunnies that get 2 bowls of lettuce so that is 3 x 2 and then that happens 4 times a day so 3 x 2 x 4.

Item	KEY	Rationale
24	$96\frac{3}{5} inches^2$	Area = $12\frac{3}{5}$ x $7\frac{2}{3}$ Area = $\frac{63}{5}$ x $\frac{23}{3}$ Area = $96\ \frac{3}{5}$

Item	KEY	Rationale
25	40 pieces	$8 \div \frac{1}{5} = 8 \times \frac{5}{1} = 8 \times 5 = 40$

Item	KEY	Rationale
26	7	$2\frac{1}{6} - \frac{?}{12} = \frac{19}{12}$ $\frac{13}{6} - \frac{?}{12} = \frac{19}{12}$ $\frac{26}{12} - \frac{?}{12} = \frac{19}{12}$ $\frac{26}{12} - \frac{7}{12} = \frac{19}{12}$

Item	KEY	Rationale
27	$\frac{3}{4}$	$2\frac{3}{4} - 1\frac{1}{4} = 1\frac{2}{4} = \frac{3}{2}$ $\frac{3}{2} \div 2 = \frac{3}{2} \times \frac{1}{2} = \frac{3}{4}$ $\frac{3}{4}$ gallon each.

Item	KEY	Rationale
28	The student made the mistake of subtracting 5 from 21 instead of multiplying 21 by 3.	[3 x (4 + 17) - 5] + [14 - (6 - 2)] = ? [3 x (21) - 5] + [14 - 4] = After this step the student made the error of subtracting 5 from 21 when the student should have multiplied 21 by 3 first. [63 - 5] + [10] = [63 - 5] + [10] = 58 + 10 = 68

Item	KEY	Rationale
29	$1\frac{23}{25}$ feet²	Area = length x width Find the area of one square and then multiply it by 12. $12 \times (\frac{2}{5} \times \frac{2}{5}) = 12 \times \frac{4}{25} = \frac{48}{25} = 1\frac{23}{25}\ feet^2$

Item	KEY	Rationale
30	11 buses	624 - 117 = 507, 507 students take the bus. 507 ÷ 48 = 10 $\frac{27}{48}$ This needs to be rounded up to 11 buses.

Breakdown of Assessment				
Operations and Algebraic thinking (OA)	Number and Operations in Base Ten (NBT)	Number and Operations - Fractions (NF)	Measurement and Data (MD)	Geometry (G) This assessment: 10%
This assessment: 16%	This assessment: 31%	This assessment: 34%	This assessment: 9%	This assessment: 9%

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