THIRD SPACE
LEARNING

5th Grade Arkansas State Practice Math Test

Arkansas Practice Test Grade 5

Grade 5

Questions

Name: ....

Class: ....

Date: ....

Score: ....

Standard: 5.NF.B.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.A.2

DOK 1

2 What is 5.6×10^6 ?

Answer:_____

Standard: 5.NBT.A.4

DOK 1

3   Select all the 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.B.3

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.A.2

DOK 3

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

Answer:_____

Standard: 5.NBT.B.6

DOK 1

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

Answer:_____

Standard: 5.G.B.4

DOK 2

7 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.OA.B.3

DOK 3

8 Lena and Linda create number patterns.
- Lena starts with the number 1 and follows the rule multiply by 4 and then add 1.
- Linda starts with the number 9 and follows the rule add 6.

What is the first number that is the same in both patterns?

Answer:_____

Standard: 5.NBT.A.3
DOK 2

9   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.OA.A.1

DOK 3

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

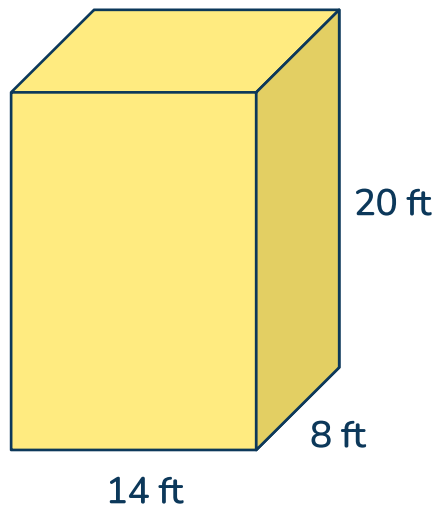$$\frac{3}{5} \times (20 \div 5 + 6) - 3$$

- Step 1: $\frac{3}{5} \times (4 + 6) - 3$

- Step 2: $\frac{3}{5} \times 10 - 3$

- Step 3: $\frac{3}{5} \times 7$

- Step 4: $\frac{21}{5}$

- Step 5: $\frac{21}{5} = 4 \frac{1}{5}$

🖉 **Answer**

Standard: 5.MD.C.5
DOK 1

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

20 ft

8 ft

14 ft

Answer:_____

Standard: 5.NBT.B.7
DOK 2

12   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.A.2
DOK 2

13   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.

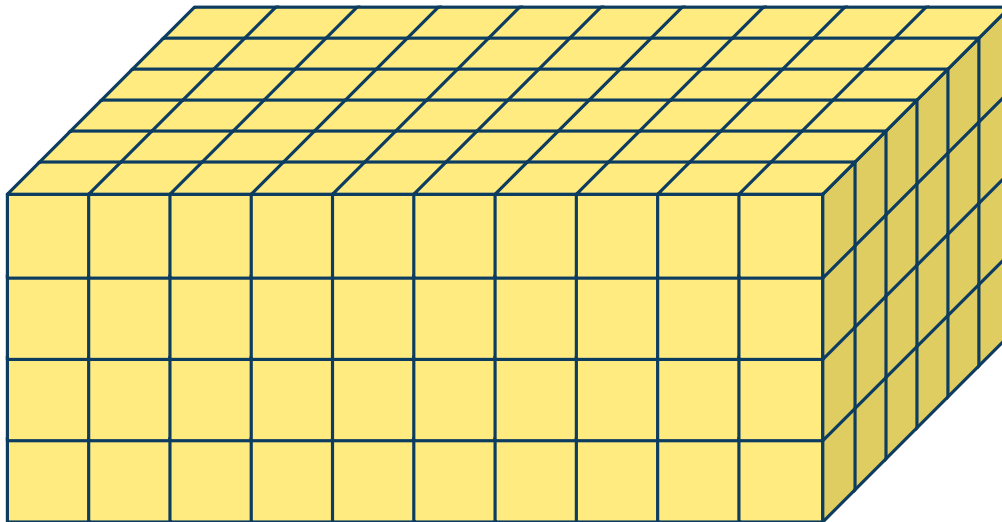- $\frac{3}{7}$ pound of M&M's
- $\frac{1}{5}$ pound of peanuts

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

✎ Answer

Standard: 5.MD.C.4
DOK 2

14 Write an expression that can be used to find the volume of the rectangular prism.

Answer:_____

Standard: 5.NBT.B.5

DOK 3

15 What are the missing numbers in the problem below?

		1	4	0	3	6	
	×						
		5	6	1		4	

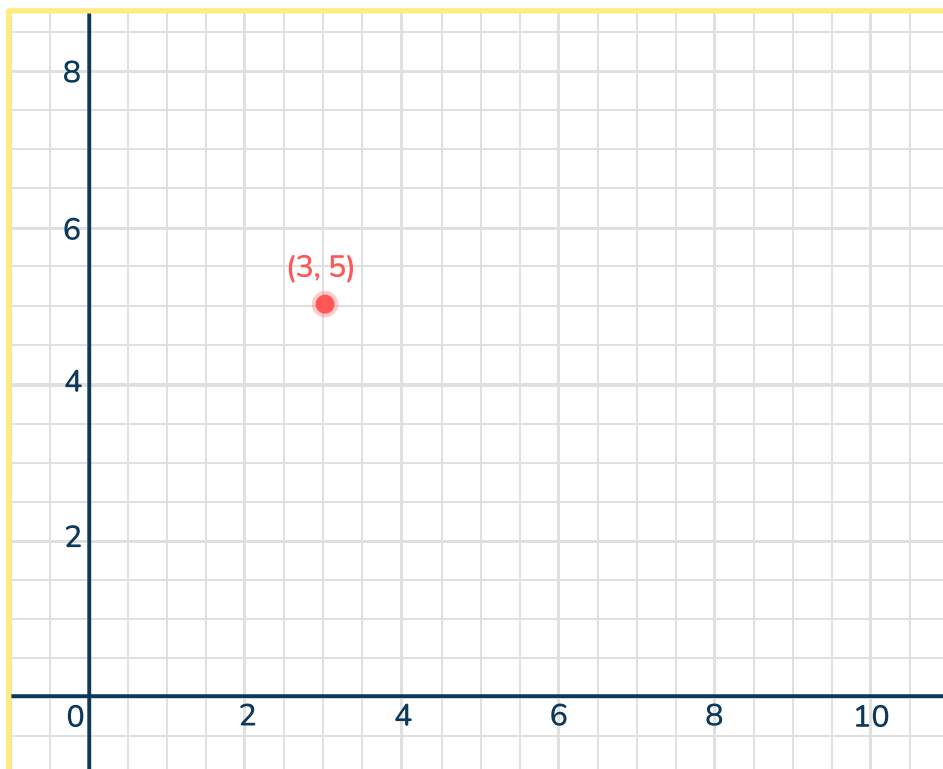✏ **Answer**

16 Move the point on the graph 2 units left and 3 units down. What is the ordered pair of the new point?
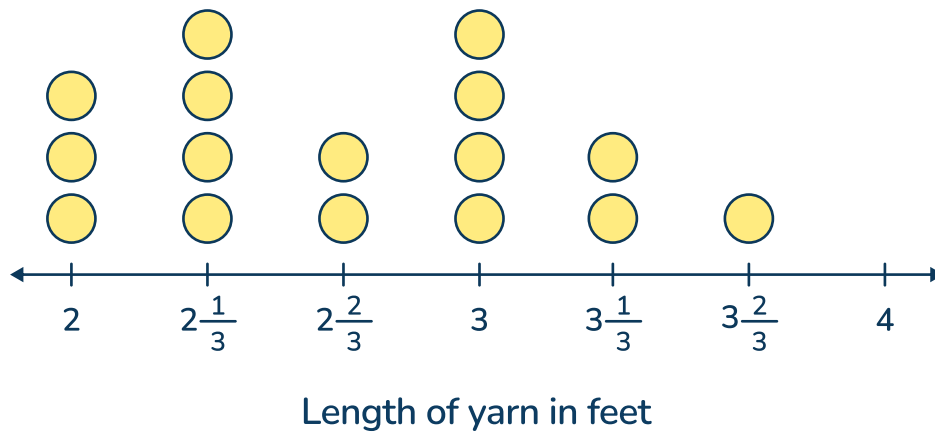

Answer:_____

Standard: 5.MD.B.2
DOK 2

17 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?

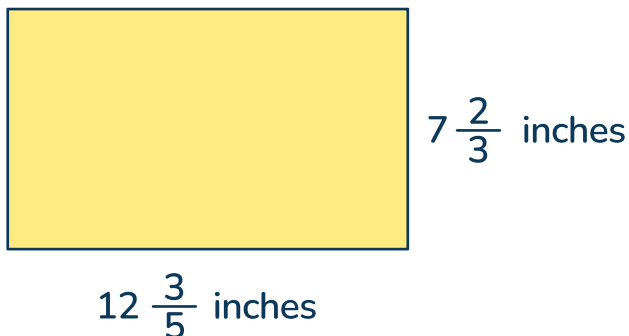Length of yarn in feet

Answer:_____

Standard: 5.OA.A.1

DOK 2

18 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.B.4

DOK 1

19 What is the area of the rectangle below?

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

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

Answer:_____

Standard: 5.NF.B.3

DOK 2

20 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.A.1

DOK 2

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

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

✏ Answer

Standard: 5.NF.B.6, 5.NF.B.7

DOK 3

22   Royal's three friends, Denny, Mike, and Kevin, want to borrow paint from him. Royal only has $2\frac{3}{4}$ 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.B.3

DOK 3

23 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] =
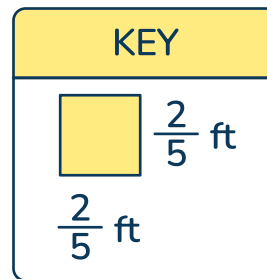
[3 x 16] + [10] =

48 + 10 = 58

✏ Answer

Standard: 5.NF.B.4

DOK 3

24   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.

KEY
$\frac{2}{5}$ ft
$\frac{2}{5}$ ft
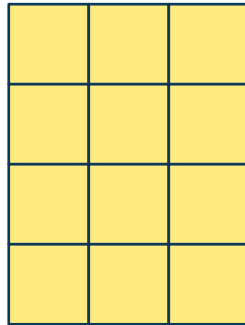
✎ Answer

Standard: 5.NBT.B.6

DOK 3

25   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	5,600,000	$5.6 \times 10^6 =$ $5.6 \times 1,000,000 =$ $5,600,000$

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

Item	KEY	Rationale
5	7 is in the tens place	$7562 \div 100 = 75.62$ The digit 7 is in the tens place.

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Item	KEY	Rationale
6	23	368 ÷ 16 = 23

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

Item	KEY	Rationale
8	21	Lena: 1, 5, 21, 85,… Linda: 9, 15, 21, 27,…

Item	KEY	Rationale
9	$60 + 2 + \dfrac{5}{100} + \dfrac{3}{1000}$	62.053 is 60 plus 2 plus 5 hundredths plus 3 thousandths. $62.053 = 60 + 2 + \dfrac{5}{100} + \dfrac{3}{1000}$

Item	KEY	Rationale
10	Step 3	To solve: $\dfrac{3}{5}$ x (20 ÷ 5 + 6) - 3 (do the division first in the parenthesis) $\dfrac{3}{5}$ x (4 + 6)-3 (then add the numbers in the parenthesis) $\dfrac{3}{5}$ x 10 - 3 (then multiply) 6 - 3 (then subtract) 3 is the correct answer Simon subtracted 3 from 10 in step 3 instead of multiply by $\dfrac{3}{5}$

Arkansas State Practice Math Test | Grade 5 | Rationales

Item	KEY	Rationale
11	2240 ft³	$V = lwh$ $V = 8 \times 14 \times 20$ $V = 2240$ 2,240 ft³

Item	KEY	Rationale
12	16.85 feet	4 x 1.15 = 4.6 7 x 1.75 = 12.25 4.6 + 12.25 = 16.85

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

Item	KEY	Rationale
14	Volume = 10 x 6 x 4	Volume is length x width x height There are 10 cubes for the length, 6 cubes for the width and 4 cubes for the height.

Item	KEY	Rationale
15	4 and 4	14036 x 4 = 56144

Arkansas State Practice Math Test | Grade 5 | Rationales

Item	KEY	Rationale
16	(1, 2)	Taking the point (3, 5) when it is moved two units left places it at (1, 5) and then taking that point and moving it 3 units down places it at (1, 2)

Item	KEY	Rationale
17	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 feet

Item	KEY	Rationale
18	3 x 2 x 4	3 bunnies 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
19	$96\frac{3}{5}$ inches²	$\text{Area} = 12\frac{3}{5} \times 7\frac{2}{3}$ $\text{Area} = \frac{63}{5} \times \frac{23}{3}$ $\text{Area} = 96\frac{3}{5}$

Item	KEY	Rationale
20	40 pieces	$8 \div \frac{1}{5} =$ $8 \times 5 = 40$

Item	KEY	Rationale
21	The missing number is 7	$2\frac{1}{6} - \frac{?}{12} = \frac{19}{12}$ $\frac{13}{6} - \frac{?}{12} = \frac{19}{12}$ $\frac{26}{12} - \frac{?}{12} = \frac{19}{12}$ Missing number is 7

Item	KEY	Rationale
22	They will each get $\frac{3}{4}$ gallon	$2\frac{3}{4} - 1\frac{1}{4} = 1\frac{2}{4}$ $1\frac{2}{4} = \frac{3}{2}$ $\frac{3}{2} \div 2 =$ $\frac{3}{2} \times \frac{1}{2} = \frac{3}{4}$ of a gallon each

Item	KEY	Rationale
23	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] = 58 + 10 = 68

Item	KEY	Rationale
24	$1\frac{23}{25}$ feet²	Area is length times width. In this case, find the area of one square and then multiply it by 12. $$12 \times \left(\frac{2}{5} \times \frac{2}{5}\right) =$$ $$12 \times \frac{4}{25}$$ $$\frac{48}{25} = 1\frac{23}{25} \text{ feet}^2$$

Item	KEY	Rationale
25	11 buses	$624 - 117 = 507$ 507 students take the bus. $507 \div 48 = 10\frac{27}{48}$ 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)
20%	32%	32%	16%

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