



**THIRD SPACE  
LEARNING**

# 4th Grade Arkansas State Practice Math Test

Arkansas Practice Test Grade 4

**Grade 4**

## Questions

Name: .....

Class: .....

Date: .....

Score: .....

*Free response and multiple choice*

**Standard: 4.NF.C.5**

**DOK 1**

- 1 What is the value of the expression,  $\frac{7}{10} + \frac{11}{100}$ ?

Answer:\_\_\_\_\_

**Standard: 4.NF.B.3**

**DOK 2**

2 Select all that are equivalent to  $\frac{12}{5}$ .

☐  $1 + 1 + \frac{1}{5} + \frac{1}{5}$

☐  $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + 1$

☐  $\frac{1}{5} + \frac{1}{5} + \frac{5}{5} + 1$

☐  $\frac{2}{5} + \frac{1}{5} + \frac{2}{5} + 1$

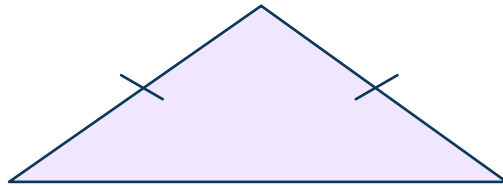
☐  $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{5}{5}$

☐  $1 + 1 + \frac{1}{5}$

**Standard: 4.G.A.2**

**DOK 2**

- 3 A shape is given below. Select all that is true.



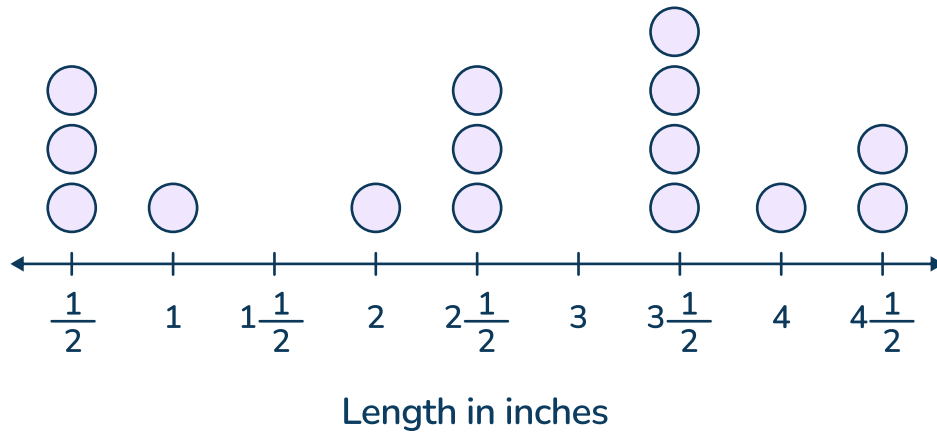
- ☐ The triangle has 1 obtuse angle.
- ☐ The triangle has two equal sides.
- ☐ The triangle has 3 equal sides
- ☐ The triangle has 1 right angle.
- ☐ The triangle has 3 acute angles.



Standard: 4.MD.B.4

DOK 1

- 4 The line plot shows the length of 15 different fish.



What is the difference in length, in inches, between the fish that is the longest and the fish that is the shortest?

Answer: \_\_\_\_\_

**Standard: 4.OA.C.5**

**DOK 2**

- 5 What is the rule for the number pattern below?

192, 48, 12, 3, ...

Answer:\_\_\_\_\_

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**Standard: 4.NF.B.4**

**DOK 3**

- 6 Which number makes the equation true?

$$14 \times \frac{2}{5} = ? \times \frac{1}{5}$$

Answer:\_\_\_\_\_

**Standard: 4.NBT.B.5**

**DOK 1**

- 7 What is the product of 6 and 3204?

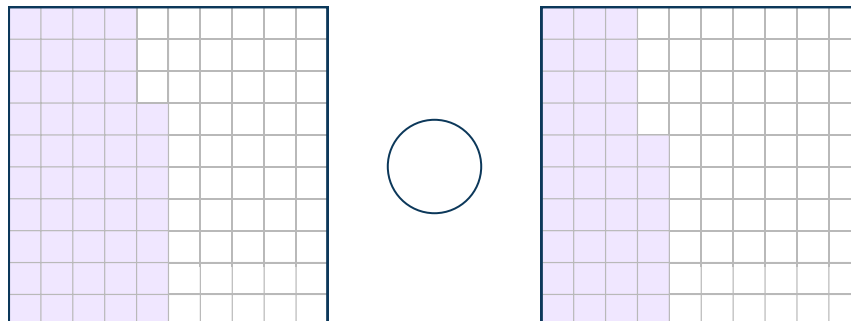
Answer:\_\_\_\_\_

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**Standard: 4.NF.C.7**

**DOK 2**

- 8 Below are two decimal models. Write an inequality statement comparing the two decimals.



Answer:\_\_\_\_\_

**Standard: 4.NBT.B.6**

**DOK 1**

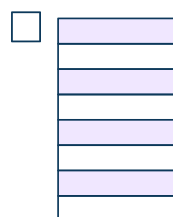
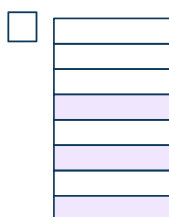
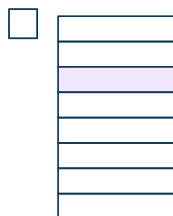
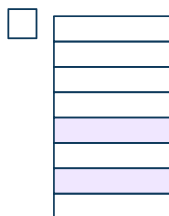
- 9 What is the value of  $3168 \div 6$  ?

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**Standard: 4.NF.B.4**

**DOK 2**

- 10 The shapes are divided into equal parts. Select the shape representing the fraction  $\frac{1}{4}$ ?



**Standard: 4.NF.A.2**

**DOK 2**

- 11** Write a fraction that makes the comparison true.  
 $\frac{3}{5} > \underline{\hspace{2cm}}$

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**Standard: 4.NF.B.3**

**DOK 2**

- 12** Roberto made salsa. He ate  $\frac{1}{8}$  of the salsa on Monday,  $\frac{3}{8}$  of the salsa on Tuesday, and  $\frac{2}{8}$  of the salsa on Wednesday. What fraction of the salsa was left after Wednesday?

Answer: \_\_\_\_\_

Standard: 4.OA.B.4

DOK 2

13 Select all the numbers that are factors of 18 and 24.

- ☐ 3
- ☐ 12
- ☐ 6
- ☐ 24
- ☐ 2
- ☐ 8

Standard: 4.OA.C.5

DOK 2

14 A number pattern starts with the number 8 and follows the rule multiply by 3 then subtract 2. Complete the table.

First Number	Second Number	Third Number	Fourth Number
8			

**Standard: 4.NBT.A.1**

**DOK 1**

- 15 What is the value of the missing number in the equation below?

$$6000 \div \underline{\hspace{2cm}} = 60$$

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**Standard: 4.OA.A.2**

**DOK 2**

- 16 A school auditorium has 198 seats divided into 9 rows. Each row has  $s$  seats. Select all the equations that can be used to solve for  $s$  seats per row.

- ☐  $198 - s$
- ☐  $s \times 9 = 198$
- ☐  $s + 9 = 198$
- ☐  $198 \div 9 = s$
- ☐  $198 \times 9 = s$

Standard: 4.OA.A.2

DOK 2

17 Demi has 4 times as many pens as Jose. Complete the table below.

Demi	Jose
	4
20	
	7
40	

Standard: 4.NBT.B.4

DOK 3

18 What is the missing digit?

		1	1	5	0	2	
		1	2		2	4	
	+	1	3	0	0	2	
		3	7	1	2	8	

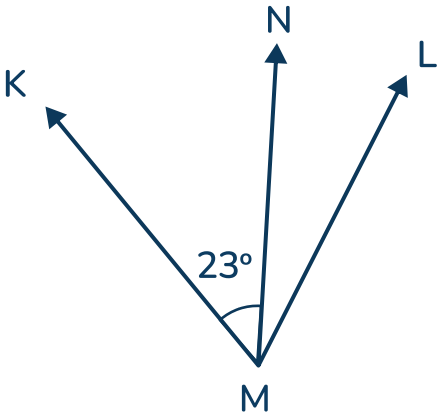
Answer:\_\_\_\_\_



Standard: 4.MD.C.7

DOK 1

- 19 In the picture below, angle KML is  $86^\circ$ . What is the measure, in degrees, of angle LMN?



Answer:\_\_\_\_\_

Standard: 4.NBT.A.3

DOK 1

- 20 Use the number 15,508 to complete the table below.

Round to the nearest 10000	Round to the nearest 1000	Round to the nearest 100	Round to the nearest 10

**Standard: 4.MD.A.3**

**DOK 2**

- 21** A school wants to put a fence around their playground. The playground is in the shape of a rectangle and has a length of 110 feet and a width of 200 feet. How much fencing will the school need?

Answer:\_\_\_\_\_

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**Standard: 4.NF.C.6**

**DOK 2**

- 22** Madeline ran 0.9 of a mile. What is the fractional equivalent of the distance she ran?

$$0.9 = \frac{?}{?}$$

Answer:\_\_\_\_\_

**Standard: 4.NBT.A.1**

**DOK 2**

- 23** How many times greater is the value of the digit 5 in the number 5,640 than the value of the 5 digit in the number 18,657?

Answer:\_\_\_\_\_

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**Standard: 4.OA.A.3**

**DOK 3**

- 24** Lynwood Elementary is having a craft sale where they are selling ornaments and candles. The ornaments are selling for \$3. Noreen bought 3 ornaments and 2 candles with the \$20 that she had. She received \$2 in change. What is the cost of 1 candle? Show your work in the space below.

Standard: 4.OA.A.3, 4.OA.A.2

DOK 3

- 25
- A bakery is preparing a large order of mini-cupcakes for a wedding. The table shows how many batches of each flavor of cupcakes were ordered.

PART A:

Fill out the table to complete the work order to help the baker determine how many of each flavor mini-cupcake she needs for the order. The table shows how many cupcakes are made from one batch, and then how many batches of each flavor she needs to make. Find the grand total of all cupcake flavors.

Mini-Cupcake Flavor	Mini-Cupcake in One Batch	Batches Ordered	Total Number of Mini-Cupcakes
Chocolate	36	9	_____
Peanut Butter Fudge	28	7	_____
Lemon Blueberry	25	6	_____
Vanilla	42	8	_____
Grand Total of Mini-Cupcake Ordered =			_____

PART B:

The baker needs to transport all of the cupcakes to the wedding venue. She can fit 24 mini-cupcakes in one box. How many boxes will she need to transport **all** of the mini-cupcakes in boxes? *Explain your answer in the space provided.*

## Rationales

Item	KEY	Rationale
1	$\frac{81}{100}$	$\frac{7}{10} + \frac{11}{100}$ $\frac{70}{100} + \frac{11}{100} = \frac{81}{100}$

Item	KEY	Rationale
2	$1 + 1 + \frac{1}{5} + \frac{1}{5}$ $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + 1$ $\frac{1}{5} + \frac{1}{5} + \frac{5}{5} + 1$ $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{5}{5}$	$1 + 1 + \frac{1}{5} + \frac{1}{5} = \frac{12}{5}$ $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + 1 = \frac{12}{5}$ $\frac{1}{5} + \frac{1}{5} + \frac{5}{5} + 1 = \frac{12}{5}$ $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{5}{5} = \frac{12}{5}$

Item	KEY	Rationale
3	<p>The triangle has 1 obtuse angle.</p> <p>The triangle has two equal sides.</p>	<p>The triangle has 1 obtuse angle - the top angle is obtuse, bigger than 90° and less than 180°.</p> <p>The triangle has two equal sides - the triangle is marked showing two equal sides.</p>

# Arkansas State Practice Math Test | Grade 4 | Rationales

Item	KEY	Rationale
4	4 inches	$4 \frac{1}{2} - \frac{1}{2} = 4$ 4 inches

Item	KEY	Rationale
5	Divide by 4	You can see from number to number that it is division by 4. $192 \div 4 = 48$ $48 \div 4 = 12$ $12 \div 4 = 3$

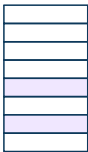
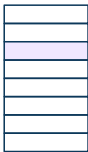
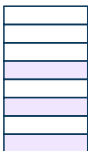
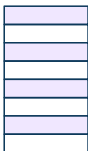
Item	KEY	Rationale
6	28	$14 \times \frac{2}{5} = ? \times \frac{1}{5}$ $14 \times \frac{2}{5} = \frac{28}{5}$ $? \times \frac{1}{5} = \frac{28}{5}$ $28 \times \frac{1}{5} = \frac{28}{5}$

Item	KEY	Rationale
7	19,224	$6 \times 3204 = 19224$

Item	KEY	Rationale
8	>	The first model is the decimal 0.47 and the second model is the decimal 0.36. $0.47 > 0.36$

# Arkansas State Practice Math Test | Grade 4 | Rationales

Item	KEY	Rationale
9	528	$3168 \div 6 = 528$

Item	KEY	Rationale
10	<input checked="" type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/> 	<p>The fraction model is divided into 8 equal parts. Two of the eight parts are shaded which is <math>\frac{2}{8} = \frac{1}{4}</math></p>

Item	KEY	Rationale
11	Possible answer, $\frac{2}{5}$	<p>Any fraction that is less than <math>\frac{3}{5}</math> will make the statement true.</p> <p>Sample answer:  <math>\frac{3}{5} &gt; \frac{2}{5}</math></p>

Item	KEY	Rationale
12	$\frac{2}{8}$ or $\frac{1}{4}$	$\frac{1}{8} + \frac{3}{8} + \frac{2}{8} = \frac{6}{8}$ $1 - \frac{6}{8} = \frac{2}{8}$ $\frac{2}{8} = \frac{1}{4}$

## Arkansas State Practice Math Test | Grade 4 | Rationales

Item	KEY	Rationale
13	3, 6, 2 are factors of 18 and 24	The factors of 18: 1, 2, 3, 6, 9, 18 The factors of 24: 1, 2, 3, 4, 6, 8, 12, 24

Item	KEY	Rationale
14	22, 64, 190	$8 \times 3 - 2 = 22$ $22 \times 3 - 2 = 64$ $64 \times 3 - 2 = 190$

Item	KEY	Rationale
15	100	$6000 \div 100 = 60$

Item	KEY	Rationale
16	$s \times 9 = 198$ $198 \div 9 = s$	198 seats divided by 9 gives the amount of seats there are in each row.  $198 \div 9 = s$ OR $s \times 9 = 198$

Item	KEY	Rationale
17	Demi: 16 20 28 40  Jose: 4 5 7 10	For the first row, take 4 and multiply by 4 $4 \times 4 = 16$  For the second row, take 20 and divide it by 4. $20 \div 4 = 5$  For the third row, take 7 and multiply it by 4. $7 \times 4 = 28$  For the fifth row, take 40 and divide it by 4. $40 \div 4 = 10$



## Arkansas State Practice Math Test | Grade 4 | Rationales

Item	KEY	Rationale
18	6	$11502 + 12624 + 13002 = 37128$

Item	KEY	Rationale
19	$63^\circ$	$86 - 23 = 63$

Item	KEY	Rationale
20	20,000 16,000 15,500 15,510	15,508 rounded to the nearest 10,000 is 20,000 15,508 rounded to the nearest 1000 is 16,000 15,508 rounded to the nearest 100 is 15,500 15,508 rounded to the nearest 10 is 15,510

Item	KEY	Rationale
21	620 feet	$110 + 110 + 200 + 200 = 620$

Item	KEY	Rationale
22	$0.9 = \frac{9}{10}$	0.9 is 9 tenths which can be written as $\frac{9}{10}$

Item	KEY	Rationale
23	100	The value of the digit 5 in 5,640 is 5000. The value of the digit 5 in 18,657 is 50. $5000 \div 50 = 100$ So, 5000 is 100 times bigger than 50.

## Arkansas State Practice Math Test | Grade 4 | Rationales

Item	KEY	Rationale
24	\$4.50	$3 \times 3 = \$9$ spent on ornaments, $20 - 9 = \$11$ (money left to buy candles) $\$11 - \$2 = \$9$ (spent on candles)  $\$9 \div 2 = \$4.50$ Each candle is \$4.50.

Item	KEY	Rationale
43 A	Chocolate = 324 Peanut Butter Fudge = 196 Lemon Blueberry = 150 Vanilla = 336 Total = 1,006	$36 \times 9 = 324$ $28 \times 7 = 196$ $25 \times 6 = 150$ $42 \times 8 = 336$ $324 + 196 + 150 + 336 = 1006$
43 B	42 boxes	$1006 \div 24 = 41 \text{ remainder } 22$ which means 42 boxes are needed

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: 28%	This Assessment: 24%	This Assessment: 32%	This Assessment: 16%

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Michelle Craig, Instructional Coach,  
Sherwood Forest Elementary, Washington

## Speak to us

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