



THIRD SPACE  
LEARNING

# 5th Grade Arizona State Practice Math Test

Arizona Practice Test Grade 5

Grade 5

## Questions

Name: .....

Class: .....

Date: .....

Score: .....

**Session 1:****20 Questions****Standard: 5.NBT.B.7****DOK 2**

The table below lists the prices of some of the top selling fruits at the grocery store. Use the table to answer question numbers 1 and 2.

Item	Size	Price
Bananas	1 bunch (6 bananas)	\$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 1 watermelon, 1 container of blueberries, and 1 bunch of bananas?

Use the space below to write your answer.


 Answer

**Standard: 5.NBT.B.7**

**DOK 2**

- 2 How much more would it cost to buy a bag of oranges than a container of strawberries?

Use the space below to write your answer.

 Answer

**Standard: 5.NF.B.3**

**DOK 3**

- 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?




- A. Point X
- B. Point Y
- C. Point W and X
- D. Point X and Y

**Standard: 5.NF.B.7**

**DOK 2**

- 4 A container of lemonade has  $\frac{1}{4}$  gallon left in it. Bella will pour all of the lemonade evenly into 5 glasses. What amount of lemonade, in gallons, will Bella pour into each glass?

Use the space below to write your answer.

 Answer

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**Standard: 5.NBT.B.7**

**DOK 2**

- 5 Ben weighs 4 times as much as his little brother. If his little brother weighs 32.7 lbs, how much does Ben weigh?

- A. 130.8 lbs
- B. 8.175 lbs
- C. 1,308 lbs
- D. 81.75 lbs




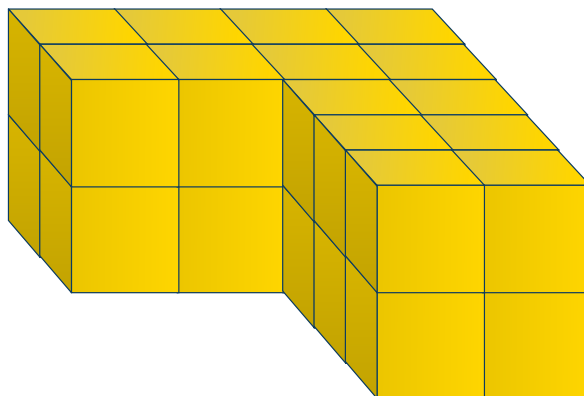
**Standard: 5.MD.C.3**

**DOK 3**

- 6 A prism made from unit cubes is shown below. Find the volume of the prism in cubic units.

Use the space below to write your answer.

 Answer




**Standard: 5.OA.A.1**

**DOK 1**

- 7 Use the correct order of operations to solve the expression below:

$$8 + 25 \times 2 - 40$$

Use the space below to show your work.

 Answer

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**Standard: 5.NF.B.7**

**DOK 3**

- 8 Emily has been measuring a flower for a science project. The flower has grown  $\frac{1}{2}$  of a centimeter each day and has grown a total of 2 centimeters taller. How many days has Emily been measuring this flower?

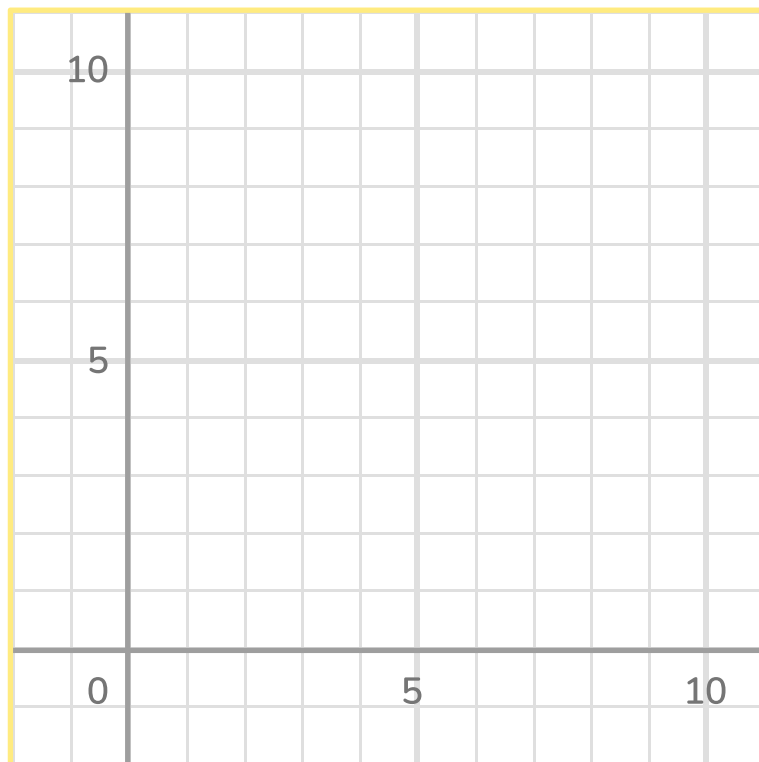
- A. 4 days
- B.  $\frac{1}{4}$  of a day
- C. 2 days
- D. 1 day


**Standard: 5.G.A.1**

**DOK 1**

- 9 What is the ordered pair of point A which is 7 units to the right of the origin and 5 units above the origin?

Use the space below to write your answer.



 Answer

Standard: 5.NBT.B.5

DOK 2

10 Find the missing number in the equation below.

$427 \times \underline{\hspace{1cm}} = 2,135$

Standard: 5.NF.B.5

DOK 2

11 Each of the multiplication expressions below has a factor of 32. What is the value of each product compared to the factor of 32?

Enter the following into the correct space in the table.

EQUAL TO 32  
LESS THAN 32  
GREATER THAN 32

Expressions	$32 \times \frac{4}{4}$	$32 \times \frac{5}{4}$	$32 \times \frac{3}{4}$
Product comparison to 32			

**Standard: 5.NBT.B.7**

**DOK 2**

- 12** Mya and her 3 friends go out to eat at a restaurant. At the end of the meal, the waiter placed the bill on the table. The total said \$98.48. They decided to split the bill equally. How much will each friend pay?

A. \$393.92  
B. \$32.83  
C. \$24.62  
D. \$295.44

---

**Standard: 5.OA.A.2**

**DOK 2**

- 13** Which expression has a value of 6 times the difference of 82 and 46?

A.  $6 \times (82 - 46)$   
B.  $6 \times (82 + 46)$   
C.  $6 \times 82 - 46$   
D.  $82 - 46 \times 6$

**Standard: 5.MD.A.1**

**DOK 2**

**14** What fraction of a meter is 5 centimeters?

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

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

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

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

---

**Standard: 5.OA.B.3**

**DOK 3**

**15** Jennifer has two sets of numbers.

- The first set starts with 2 and follows a pattern of increasing by 4.
- The second set starts with 41 and follows a pattern of decreasing by 5.

How many numbers do the two sets have in common?

A. 4

B. 3

C. 2

D. 1

**Standard:** 5.NBT.A.3

**DOK 2**

- 16** The table below shows the time it took four swimmers to complete their laps in a pool.

Lap Times

Swimmer	Time (minutes)
1	5.42
2	6.014
3	6.14
4	5.4

Which comparison of these times is NOT correct?

- A.  $5.42 > 5.4$
- B.  $5.4 < 6.14$
- C.  $6.14 = 6.014$
- D.  $6.014 < 6.14$

**Standard: 5.OA.A.1**

**DOK 3**

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


Step 1:  $[3 \times (4 + 17) - 5] + [14 - (6 - 2)] = ?$

Step 2:  $[3 \times (21) - 5] + [14 - 4] =$

Step 3:  $[3 \times 16] + [10] =$

Step 4:  $48 + 10 = 58$

Use the space below to write your answer.

 Answer



**Standard: 5.NF.B.6**

**DOK 2**

- 18 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 space below.

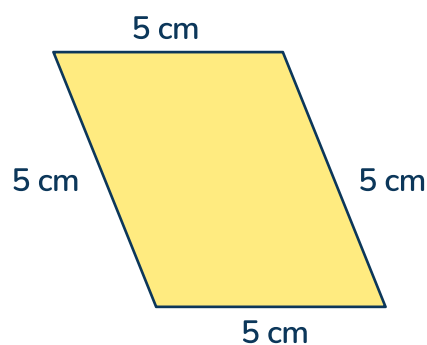
 Answer

---

**Standard: 5.G.B.4**

**DOK 2**

- 19 Select all the names that the shape can be classified as:



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

**Standard:** 5.NBT.A.3

**DOK** 2

**20** What is the correct way to write 302.105 in expanded form?

A.  $3 \times 100 + 2 \times 1 + 1 \times \left(\frac{1}{10}\right) + 5 \times \left(\frac{1}{1,000}\right)$

B.  $3 \times 100 + 2 \times 1 + 1 \times \left(\frac{1}{100}\right) + 5 \times \left(\frac{1}{1,000}\right)$

C.  $3 \times 100 + 2 \times 10 + 1 \times 1 + 5 \times \left(\frac{1}{10}\right)$

D.  $3 \times \left(\frac{1}{100}\right) + 2 \times \left(\frac{1}{1}\right) + 1 \times \left(\frac{1}{10}\right) + 5 \times \left(\frac{1}{1,000}\right)$

**Grade 5 (AASA)**

**Session 2:**

**15 Questions**

**Standard: 5.NF.B.3, 5.NF.B.5**

**DOK 3**

- 1** Arianna had 3 pieces of wood painted different colors for a class project, all a different length. She cut each piece of wood into smaller pieces.
- The painted white piece of wood was 3 feet long, cut into 5 equal pieces.
  - The painted red piece of wood was 4 feet long, cut into 3 equal pieces.
  - The painted blue piece of wood was 3 feet long, cut into 4 equal pieces.

Which smaller piece of wood has the greatest length?

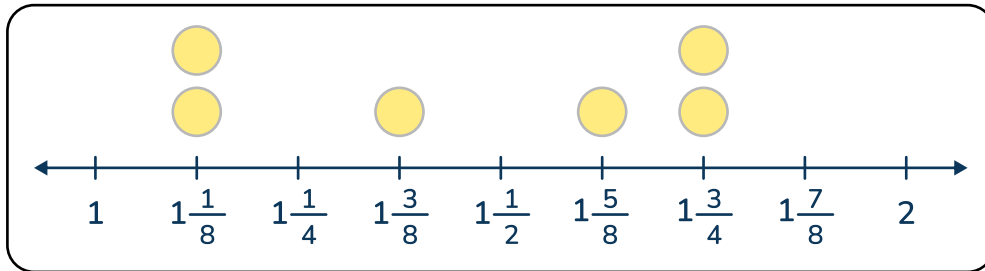
Use the space below to write your answer:

 Answer

Standard: 5.MD.B.2

DOK 2

- 2 The line plot below shows the heights of Lucy's plants in inches. What is the total height, in inches, of the 3 tallest plants?



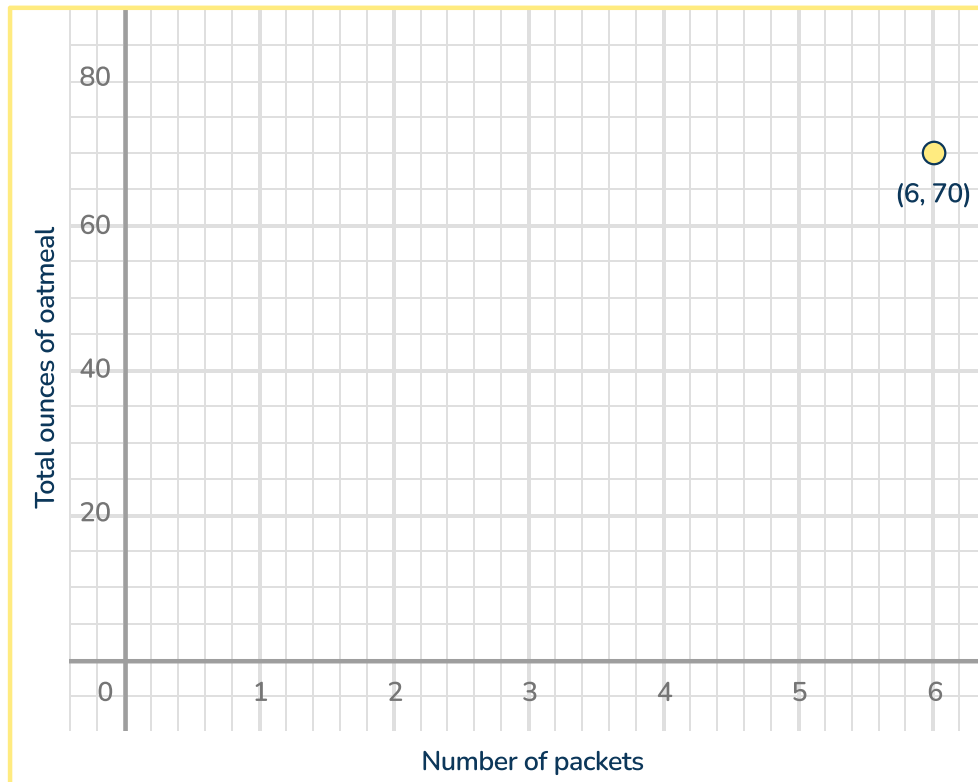
Use the space below to write your answer.

 Answer

Standard: 5.G.A.2

DOK 2

- 3 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.

**Standard: 5.NF.B.6**

**DOK 2**

- 4 One batch of chocolate chip cookies requires  $2\frac{2}{3}$  cups of flour. How many cups of flour would be needed to make 5 batches of cookies?

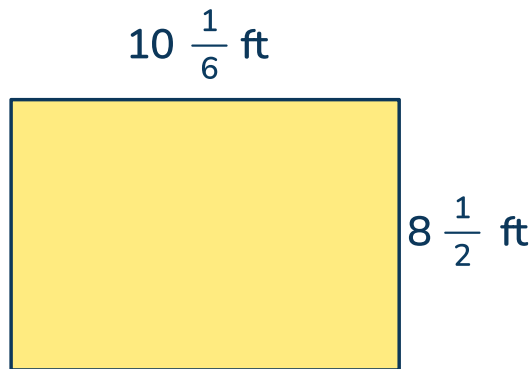
Use the space below to write your answer.

 Answer

**Standard: 5.NF.B.6**

**DOK 2**

- 5 Maxine is getting new carpet installed in her bedroom. The diagram below shows the dimensions of her bedroom floor. If the carpet covers the entire floor, what will be the area of the carpet?

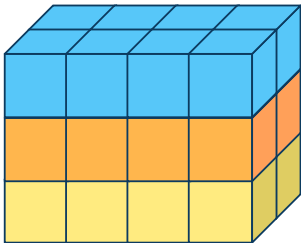


- A.  $18 \frac{2}{3}$  square feet
- B.  $37 \frac{1}{3}$  square feet
- C.  $86 \frac{5}{12}$  square feet
- D.  $80 \frac{1}{12}$  square feet

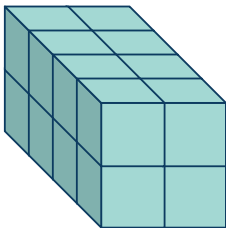
Standard: 5.MD.C.4

DOK 2

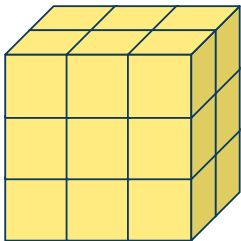
- 6
- There are 3 rectangular prisms below. Determine whether each prism has a volume greater than or less than 20 cubic units.



Prism A



Prism B



Prism C

Check off the column that is true.

	Less than 20 cubic units	Greater than 20 cubic units
Prism A		
Prism B		
Prism C		



**Standard: 5.NBT.A. 4**

**DOK 1**

- 7 Kourtney bought 143.59 pounds of grain to feed the goats at her farm. What is the weight of the grain to the nearest tenth? Write your answer in the space below.

 Answer

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**Standard: 5.NBT.A.2**

**DOK 3**

- 8 Select the equations that can be correct if the empty space had the value,  $10^2$ .

A.  $5.4 \times \underline{\hspace{1cm}} = 5400$

B.  $7.3 \times \underline{\hspace{1cm}} = 730$

C.  $83 \times \underline{\hspace{1cm}} = 8300$

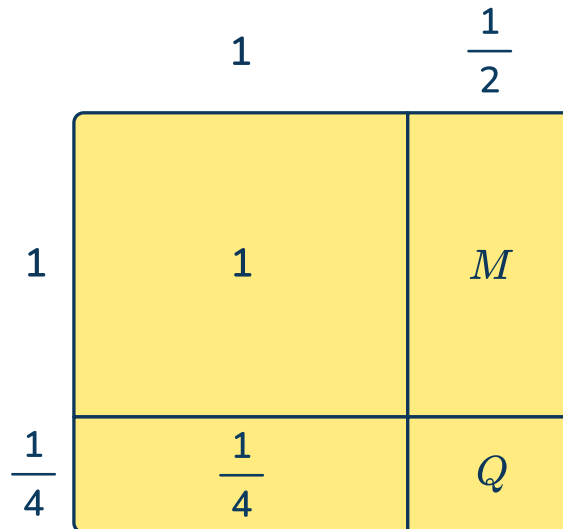
D.  $7 \times \underline{\hspace{1cm}} = 7000$

E.  $2.51 \times \underline{\hspace{1cm}} = 251$


Standard: 5.NF. B.4

DOK 3

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



What is the value of M and Q in this model?  
Use the space below to write your answer.


 Answer

**Standard:** 5.NBT.B.6

**DOK 3**

- 10** A candy shop has 637 pieces of taffy. The taffy will be put into a box that holds 14 pieces each to be sold for \$3.75. How many full boxes of taffy can be created to sell?

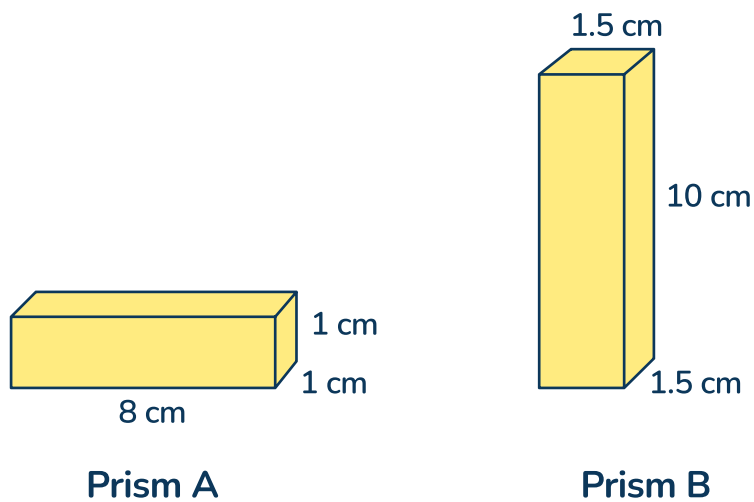
Use the space below to write your answer.

 Answer

**Standard: 5.MD.C.4**

**DOK 2**

- 11** What is the total volume of prism A and prism B?



- A.  $30.5 \text{ cm}^3$
- B.  $30 \text{ cm}^3$
- C.  $30.5 \text{ cm}^2$
- D.  $22.5 \text{ cm}^3$

**Standard: 5.NBT.B.7**

**DOK 2**

- 12** A snowstorm brought snow over three days in Chicago, totaling 48.7 inches.
- Monday it snowed 14.2 inches
  - Tuesday it snowed 20.6 inches

How much snow fell on Wednesday?

Use the space below to write your answer.

 Answer

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**Standard: 5.NBT.A.4**

**DOK 1**

- 13** Select the decimals that round to 5.6 when rounded to the nearest tenth.

- A. 5.56
- B. 5.52
- C. 5.61
- D. 5.65
- E. 5.59

Standard: 5.NBT.A.1

DOK 3


- 14 How does the digit 5 in the number 54,082 compare to the digit 5 in the number 60,532?  
Use the space below to explain your answer.

 Answer

Standard: 5.NBT.B.5

DOK 2

- 15 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	
			3	2	7
		×		4	3
			<sup>1</sup> 9	8	1
+	1	<sup>1</sup> 3,		8	0
	1	4,	0	6	1

Place your answer in the space:\_\_\_\_\_

## Answer Key

Answer Key			
Session 1			
Item number	Correct answer	Standard(s)	DOK
1	\$14.58	5.NBT.B.7	DOK 2
2	\$0.86	5.NBT.B.7	DOK 2
3	C	5.NF.B.3	DOK 3
4	$\frac{1}{20}$	5.NF.B.7	DOK 2
5	A	5.NBT.B.7	DOK 2
6	28 cubic units	5.MD.C.3	DOK 3
7	18	5.OA.A.1	DOK 1
8	A	5.NF.B.7	DOK 3
9	(7, 5)	5.G.A.1	DOK 1
10	5	5.NBT.B.5	DOK 2
11	1. Equal to 32 2. Greater than 32 3. Less than 32	5.NF.B.5	DOK 2
12	\$24.62	5.NBT.B.7	DOK 2
13	A	5.OA.A.2	DOK 2
14	B	5.MD.A.1	DOK 2

# Arizona State Practice Math Test | Grade 5 | Answers

Answer Key			
Session 1			
Item number	Correct answer	Standard(s)	DOK
15	C	5.OA.B.3	DOK 3
16	C	5.NBT.A.3	DOK 2
17	Step 3: You do not subtract 5 from 21 before multiplying. It should be $(63 - 5) + (14 - 4)$	5.OA.A.1	DOK 3
18	$2\frac{5}{6}$	5.NF.B.6	DOK 2
19	A, D, E	5.G.B.4	DOK 2
20	A	5.NBT.A.3	DOK 2
Session 2			
Item number	Correct answer	Standard(s)	DOK
1	The smaller piece of red painted wood is the longest with a length of $\frac{4}{3}$ ft $\frac{4}{3}$ is greater than both $\frac{3}{5}$ and $\frac{3}{4}$	5.NF.B.3, 5.NF.B.5	DOK 3
2	$5\frac{1}{8}$	5.MD.B.2	DOK 2
3	B	5.G.A.2	DOK 2
4	$13\frac{1}{3}$ cups of flour	5.NF.B.6	DOK 2



# Arizona State Practice Math Test | Grade 5 | Answers

Session 2			
Item number	Correct answer	Standard(s)	DOK
5	C	5.NF.B.6	DOK 2
6	Prism A: Greater than 20 cubic units Prism B: Less than 20 cubic units Prism C: Less than 20 cubic units	5.MD.C.4	DOK 2
7	143.6 pounds	5.NBT.A.4	DOK 1
8	B, C, E	5.NBT.A.2	DOK 3
9	$M = 1 \times \frac{1}{2} = \frac{1}{2}$ $Q = \frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$	5.NF.B.4	DOK 3
10	45 boxes	5.NBT.B.6	DOK 3
11	C	5.MD.C.4	DOK 2
12	13.9 inches of snow fell on Wednesday	5.NBT.B.7	DOK 2
13	A, C, E	5.NBT.A.4	DOK 1
14	The 5 in 54,082 is 50,000 and the 5 in 60,532 is 500, 500 x 100 = 50,000, 100 times the value	5.NBT.A.1	DOK 3
15	0	5.NBT.B.5	DOK 2

## Rationales

Item	Item	Rationale
1	1	Students need to add the three prices together; $\$9.87 + \$3.99 + \$0.72 = \$14.58$
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
2	1	Students know to subtract the price of strawberries from the price of oranges; $\$5.75 - \$4.89 = \$0.86$
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
3	1	To determine this answer, students must realize that given this scenario, they can get an answer less than or greater than $\frac{1}{8}$ , but not greater than $\frac{2}{8}$ . They can think of examples like $\frac{3}{8} \times 2$ for point W, and $\frac{5}{8} \times 2$ for point X.
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
4	1	To determine the solution, the student will have to divide $\frac{1}{4}$ by 5, which is $\frac{1}{20}$
	0	The response is incorrect or irrelevant.

Item	Item	Rationale
5	1	Students should multiply the little brother's weight of 32.7 lbs by 4 to get Ben's weight. $32.7 \times 4 = 130.8$ lbs
	0	Answer is incorrect or irrelevant.

## Arizona State Practice Math Test | Grade 5 | Rationales

Item	Item	Rationale
6	1	The student correctly counts the cubes and knows that the volume is 28 units <sup>3</sup> (cubic units)
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
7	1	The student used the proper order of operations (PEMDAS) to correctly solve the equation given. $8 + 50 - 40$ $58 - 40 = 18$
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
8	1	The student correctly chooses A. To determine this answer, students need to divide 2 by $\frac{1}{2}$ and must realize that there are 4 halves in 2.
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
9	1	The student identifies the point as (7, 5).
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
10	1	The student identifies the missing number to be 5. $2135 \div 427 = 5$
	0	Answer is incorrect or irrelevant.

## Arizona State Practice Math Test | Grade 5 | Rationales

Item	Item	Rationale
11	1	The student correctly places the answers in the right boxes.  $32 \times \frac{4}{4}$ – <b>EQUAL TO 32</b>  $32 \times \frac{5}{4}$ – <b>GREATER THAN 32</b>  $32 \times \frac{3}{4}$ – <b>LESS THAN 32</b>
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
12	1	Students should divide the total, \$98.48, by the number of people, which is 4. $\$98.48 \div 4 = \$24.62$
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
13	1	The student chooses A $6 \times (82 - 46)$
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
14	1	To determine the answer, the student would need to determine what fraction is equal to $\frac{5}{100}$ . There are 100 centimeters in a meter, which is $\frac{1}{20}$ , B
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
15	1	The student was able to follow the pattern correctly and identify that the numbers had 2 numbers in common (6 and 26). C
	0	Answer is incorrect or irrelevant.

## Arizona State Practice Math Test | Grade 5 | Rationales

Item	Item	Rationale
16	1	The student likely compared the two numbers given in the comparison and came to the realization that 6.14 is greater than 6.014, not equal. C
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
17	1	The student identifies the error in Step 3 because you do not subtract 5 from 21 before multiplying. It should be $(63 - 5) + (14 - 4)$
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
18	1	The student correctly subtracts and gets the answer: $2\frac{5}{6}$
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
19	1	The student correctly chooses, A, D, E
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
20	1	The student correctly selects choice A which is the correct expanded form of the decimal number. $302.105 = 3 \times 100 + 2 \times 1 + 1 \times (\frac{1}{10}) + 5 \times (\frac{1}{1,000})$
	0	Answer is incorrect or irrelevant.

## Arizona State Practice Math Test | Grade 5 | Rationales

Item	Item	Rationale
1	1	The student correctly identifies the smaller piece of red wood to be the longest at $\frac{4}{3}$ ft.  $\frac{4}{3}$ is greater than both $\frac{3}{5}$ and $\frac{3}{4}$
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
2	1	To determine this answer, students add the three tallest plants $1\frac{3}{4} + 1\frac{3}{4} + 1\frac{5}{8} = 5\frac{1}{8}$
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
3	1	The student correctly identifies that the x-coordinate is the number of packets of oatmeal and the y-coordinate is the weight, so choice B.
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
4	1	Students need to multiply the amount of flour by the number of batches; $2\frac{2}{3} \times 5 = 13\frac{1}{3}$
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
5	1	To find the area, students need to multiply the length and width of the bedroom; $10\frac{1}{6} \text{ ft} \times 8\frac{1}{2} \text{ ft} = 86\frac{5}{12} \text{ sq ft}$ , C
	0	Answer is incorrect or irrelevant.

## Arizona State Practice Math Test | Grade 5 | Rationales

Item	Item	Rationale
6	1	The student correctly checks off the correct comparison.  Prism A: Greater than 20 cubic units Prism B: Less than 20 cubic units Prism C: Less than 20 cubic units
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
7	1	The student correctly rounds the number to 143.6 pounds
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
8	1	The student correctly chooses, B, C, E because $7.3 \times 100 = 730$ $83 \times 100 = 8300$ $2.51 \times 100 = 251$
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
9	1	The student correctly finds the value of $M = 1 \times \frac{1}{2} = \frac{1}{2}$ and $Q = \frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
10	1	The student correctly divided $637 \div 14 = 45.5$ , so only 45 full boxes
	0	Answer is incorrect or irrelevant.

## Arizona State Practice Math Test | Grade 5 | Rationales

Item	Item	Rationale
11	1	The student selects choice C. Volume of Prism A: $8 \times 1 \times 1 = 8 \text{ cm}^3$ Volume of Prism B: $10 \times 1.5 \times 1.5 = 22.5 \text{ cm}^3$ $8 + 22.5 = 30.5 \text{ cm}^3$
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
12	1	The student problem solves by, $14.2 + 20.6 = 34.8$ $48.7 - 34.8 = 13.9$ 13.9 inches fell on Wednesday.
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
13	1	The student chooses A, C, E because: 5.56 rounds to 5.6 5.61 rounds to 5.6 5.59 rounds to 5.6
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
14	1	The student correctly identifies that the digit 5 in 54,082 is 100 times the digit 5 in 60,532. This is because the 5 in 54,082 is 50,000 and the 5 in 60,532 is 500, $500 \times 100 = 50,000$
	0	Answer is incorrect or irrelevant.

Item	Item	Rationale
15	1	The student understands the algorithm for multiplication and identifies the missing number to be 0 because $2 \times 4 = 8$ $+ 2 = 10$
	0	Answer is incorrect or irrelevant.






Arizona State Practice Math Test | Grade 4 | Answers

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)
11%	39%	28%	14%	8%

## Do you have a group of students who need a boost in math?

Each student could receive personalized lessons every week from our specialist one-on-one math tutors.




-  Differentiated instruction for each student
-  Aligned to your state's standards
-  Scaffolded learning to close gaps

“We just had our first session and it went great! The kids really liked it and felt like they were learning! One even said he finally felt like math was making sense.”



Michelle Craig, Instructional Coach,  
Sherwood Forest Elementary, Washington

## Speak to us

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