



Computer-Based Sample Test Scoring Guide Grade 3 Math



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Prepared by the Arizona Department of Education*

About the Sample Test Scoring Guide

The Arizona's Academic Standards Assessment (AASA) Sample Test Scoring Guides provide details about the items, student response types, correct responses, and related scoring considerations for AASA Sample Test items.

Within this guide, each item is presented with the following information:

- Item number
- Cluster
- Content Standard
- Depth of Knowledge (DOK)
- Static presentation of the item
- Static presentation of student response field (when appropriate)
- Answer key, rubric or exemplar
- Applicable score point(s) for each item

The items included in this guide are representative of the kinds of items that students can expect to experience when taking the computer-based test for AASA Grade 3 Math.

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
1	3.NF.A	3.NF.A.1	1

The rectangle shown is divided into equal parts. Shade $\frac{4}{6}$ of the rectangle.

Select the parts you want to shade.

A fraction model consisting of a rectangle divided into 6 equal horizontal strips. The top 4 strips are shaded purple, and the bottom 2 strips are white. Below the rectangle are three buttons: 'Fewer', 'More', and 'Reset'.

Scoring Rubric	
Score	Description
1	Student shades 4 out of 6 parts of the fraction model.
0	The response is incorrect or irrelevant.

(1 Point) Student shades the correct parts of the fraction model.

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
2	3.OA.A	3.OA.A.2	2

The expression $24 \div 8$ can be used to represent the following sentences.

Complete the sentences by selecting the correct answers from the drop-down menus.

There are books placed equally into boxes. There are books in each box.

Scoring Rubric	
Score	Description
1	Student selects 24 from the first drop-down menu, 8 from the second drop-down menu, and 3 from the third drop-down menu. $24 \div 8 = 3$
0	The response is incorrect or irrelevant.

(1 Point)

Grade 3 Math Sample Test

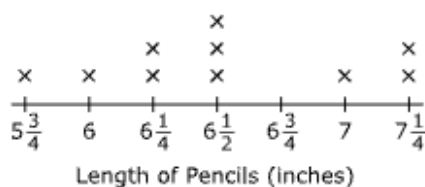
Item Number	Cluster	Content Standard	DOK
3	3.MD.B	3.MD.B.4	2

The lengths, in inches, of 10 pencils are given.

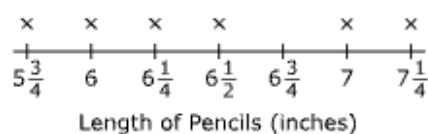
$5\frac{3}{4}$, 6, $6\frac{1}{4}$, $6\frac{1}{4}$, $6\frac{1}{2}$, $6\frac{1}{2}$, $6\frac{1}{2}$, 7, $7\frac{1}{4}$, $7\frac{1}{4}$

Which line plot displays the pencil lengths?

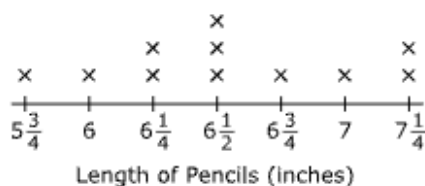
☒ A.



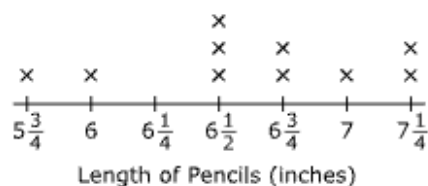
☐ B.



☐ C.



☐ D.



(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
4	3.NBT.A	3.NBT.A.1	2

What is the value of 783 rounded to the nearest ten?

Enter your answer in the space provided.

780



1	2	3
4	5	6
7	8	9
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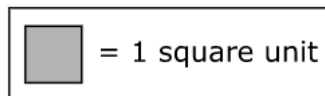
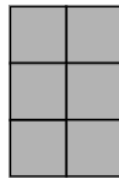
Scoring Rubric	
Score	Description
1	The student entered 780 or any equivalent value, providing evidence of the ability to round numbers up to 1,000 to the nearest ten.
0	The response is incorrect or irrelevant.

(1 Point)

Grade 3 Math Sample Test

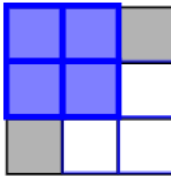
Item Number	Cluster	Content Standard	DOK
5	3.MD.C	3.MD.C.5	1

A rectangle made of 6 square units is shown.



Another rectangle made of square units is shown, with some square units shaded. Which square units could be selected so that the total shaded area of this rectangle is equal to the area of the rectangle above?

Select square units to create the correct total shaded area. The total shaded area can be made from any pattern of square units.



Scoring Rubric	
Score	Description
1	Student selects 4 total square units, thus creating a total shaded area of 6 square units.
0	The response is incorrect or irrelevant.

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
6	3.OA.A	3.OA.A.4	2

An equation with a missing number is given.

$$35 \div \square = 7$$

What is the value of the missing number?

Enter your answer in the space provided.

5

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1	2	3
4	5	6
7	8	9
	0	$\frac{\square}{\square}$
.	-	$\frac{\square}{\square}$

Scoring Rubric	
Score	Description
1	The student determined the missing number is 5 or any equivalent value, providing evidence of the ability to find the value of a missing divisor in an equation.
0	The response is incorrect or irrelevant.

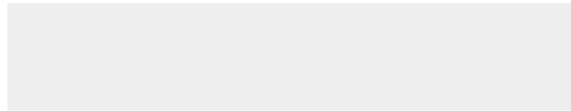
(1 Point)

Grade 3 Math Sample Test

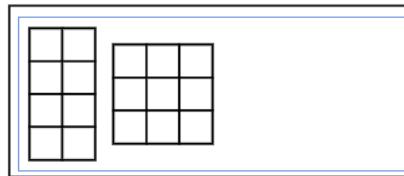
Item Number	Cluster	Content Standard	DOK
7	3.MD.C	3.MD.C.6	3

There are four rectangles made up of unit squares. Which rectangles have an area less than 10 square units and which have an area greater than 10 square units?

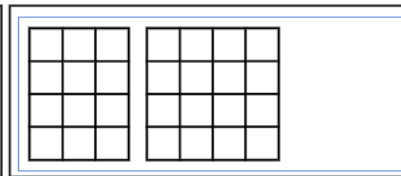
Move the answers to the correct boxes.



Less than 10
Square Units



Greater than 10
Square Units



☐ = 1 square unit

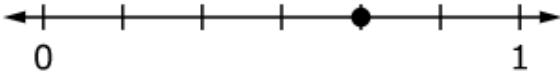
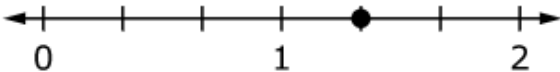
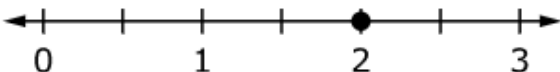
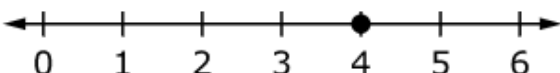
Scoring Rubric	
Score	Description
1	Student places the 2 x 4 and the 3 x 3 rectangles into the "Less than 10 square units" gap and places the 3 x 4 and the 4 x 4 rectangles into the "Greater than 10 square units" gap.
0	The response is incorrect or irrelevant.

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
8	3.NF.A	3.NF.A.2	1

Which number line represents $\frac{4}{6}$?

- ☒ A. 
- ☐ B. 
- ☐ C. 
- ☐ D. 

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
9	3.OA.C	3.OA.C.7	3

Tara has 6 shelves in her room. She will put 5 books on each shelf. Complete the equation to find the total number of books Tara will put on the shelves.

Enter your answer in the box provided.

$6 \times 5 = 30$



1	2	3
4	5	6
7	8	9
	0	$\frac{\Box}{\Box}$
.	-	$\frac{\Box}{\Box}$

Scoring Rubric	
Score	Description
1	Student response is 5 in the first box and 30 in the second box. Equivalent numbers are acceptable.
0	The response is incorrect or irrelevant.

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
10	3.NBT.A	3.NBT.A.3	2



Mrs. Yoder buys 7 boxes of chalk for her school. Each box contains 30 pieces of chalk.

How many pieces of chalk does Mrs. Yoder buy?

Enter your answer in the space provided.

210

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1	2	3
4	5	6
7	8	9
	0	
.	-	

Scoring Rubric	
Score	Description
1	The student correctly calculated that Mrs. Yoder buys 210 pieces of chalk, or any equivalent value, providing evidence of the ability to multiply one-digit whole numbers by multiples of 10.
0	The response is incorrect or irrelevant.

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
11	3.OA.D	3.OA.D.10	2

An expression is given.

$$813 - 495$$

Which equation best shows how to estimate the value of the expression?

- ☒ A. $800 - 500 = 300$
- ☐ B. $800 - 400 = 400$
- ☐ C. $900 - 500 = 400$
- ☐ D. $900 - 400 = 500$

(1 Point)

Grade 3 Math Sample Test

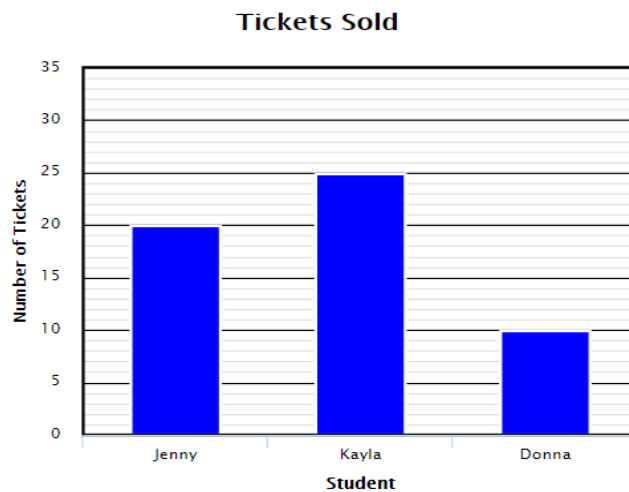
Item Number	Cluster	Content Standard	DOK
12	3.MD.B	3.MD.B.3	2

The table shows the number of tickets to a school event that were sold by each of 3 students.

Student	Tickets Sold
Jenny	13
Kayla	25
Donna	10

On the final day of sales, Jenny sold an additional 7 tickets. Complete the bar graph to show the total number of tickets sold by each of the 3 students.

Drag the top of each bar to the correct height.



Scoring Rubric	
Score	Description
1	Student response is to drag the first bar in the graph to 20, the second bar to 25, and the third bar to 10.
0	The response is incorrect or irrelevant.

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
13	3.OA.B	3.OA.B.5	2

Determine if the expressions shown in the table are equivalent or not equivalent to $2 \times 4 \times 6$.

Select **all** the correct answers.

$2 \times 4 \times 6$	Equivalent	Not Equivalent
24×2	<input checked="" type="radio"/>	<input type="radio"/>
6×6	<input type="radio"/>	<input checked="" type="radio"/>
$4 \times 6 \times 2$	<input checked="" type="radio"/>	<input type="radio"/>

Scoring Rubric	
Score	Description
1	Student selects Equivalent for the first row, Not Equivalent for the second row, and Equivalent for the third row.
0	The response is incorrect or irrelevant.

(1 Point)

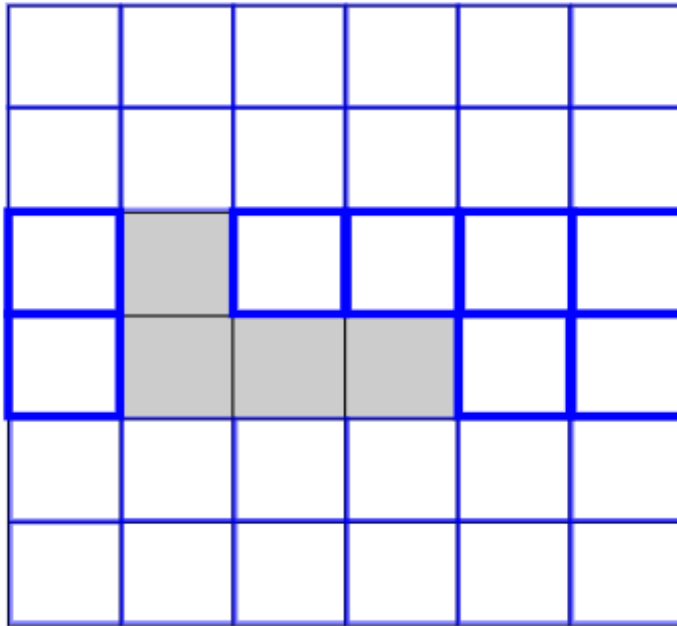
Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
14	3.G.A	3.G.A.2	3

The shaded sections in the grid show $\frac{1}{3}$ of a rectangle.

Which additional sections will complete the whole rectangle?

Select all the answers that complete the diagram.



Scoring Rubric	
Score	Description
1	The student correctly completed the rectangle with 8 additional sections, providing evidence of the ability to partition shapes into b parts with equal areas and express the area of each part as a unit fraction $\frac{1}{b}$ of the whole, or any response in which 8 additional grid sections are added to form a rectangle.
0	The response is incorrect or irrelevant.

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
15	3.MD.A	3.MD.A.1	3

Richard rides his bike to a park.

- He leaves his house at 3:21 p.m.
- It takes him 24 minutes to ride to the park.
- The ride back to his house takes 3 minutes less than his ride to the park.
- Richard gets back to his house at 4:42 p.m.

How many minutes was Richard at the park?

Enter your answer in the space provided.

36

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1	2	3
4	5	6
7	8	9
	0	$\frac{\Box}{\Box}$
.	-	$\frac{\Box}{\Box}$

Scoring Rubric	
Score	Description
1	The student entered 36 or any equivalent value, providing evidence of the ability to solve word problems involving addition and subtraction of time intervals in minutes.
0	The response is incorrect or irrelevant.

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
16	3.OA.A	3.OA.A.1	2

Sophia has 24 bananas.

Select **all** the phrases that describe how Sophia could arrange her bananas.

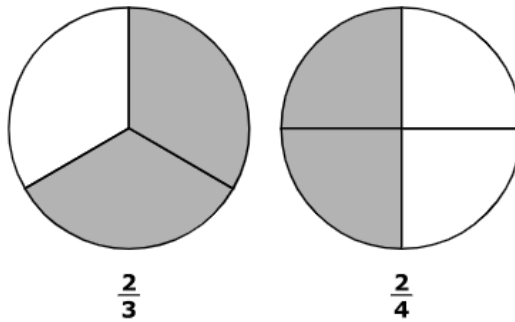
- ☒ A. 2 groups of 12 bananas each
- ☐ B. 4 groups of 20 bananas each
- ☒ C. 6 groups of 4 bananas each
- ☒ D. 8 groups of 3 bananas each
- ☐ E. 19 groups of 5 bananas each

(1 Point) Student checked all of the correct options.

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
17	3.NF.A	3.NF.A.3	2

Two fraction models are shown.



Complete the sentences comparing $\frac{2}{3}$ and $\frac{2}{4}$ by selecting the correct answers from the drop-down menus.

Each part in the model of $\frac{2}{3}$ is each part in the model of $\frac{2}{4}$.

There are 2 parts shaded in each model.

Therefore, $\frac{2}{3}$ $\frac{2}{4}$.

Scoring Rubric	
Score	Description
1	<p>The student correctly completed the statements, providing evidence of the ability to compare two fractions with the same numerator by reasoning about their size and recording results of comparisons with symbols.</p> <p>Each part in the model of $\frac{2}{3}$ is larger than each part in the model of $\frac{2}{4}$.</p> <p>There are 2 parts shaded in each model. Therefore, $\frac{2}{3} > \frac{2}{4}$.</p>
0	The response is incorrect or irrelevant.

(2 Points) Student selected both correct answers from the dropdowns.

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
18	3.OA.D	3.OA.D.8	2

Mario has 23 blue blocks and 25 green blocks. He uses all the blocks to build 8 towers. Each tower has the same number of blocks.

How many blocks are in each tower?

Enter your answer in the space provided.

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1	2	3
4	5	6
7	8	9
	0	<div><div></div><div></div></div>
.	-	<div><div></div><div></div></div>

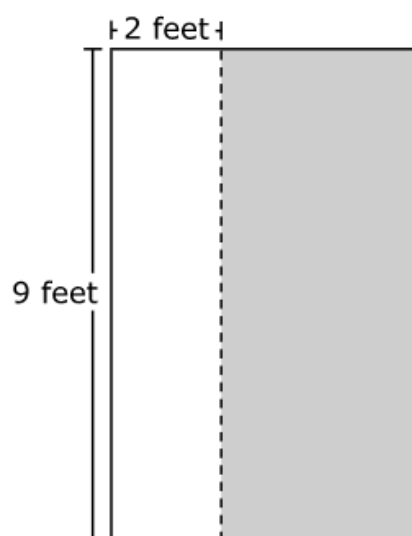
Scoring Rubric	
Score	Description
1	The student entered 6 or any equivalent value, providing evidence of the ability to solve a two-step problem using addition and division.
0	The response is incorrect or irrelevant.

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
19	3.MD.C	3.MD.C.7	3

Monique paints the shaded part of a wall, as shown.



The wall has a total area of 45 square feet.

What is the area, in square feet, of the part of the wall that Monique paints?

- ☐ A. 18 square feet
- ☒ B. 27 square feet
- ☐ C. 34 square feet
- ☐ D. 63 square feet

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
20	3.OA.D	3.OA.D.9	2

Each column and row in the table shows numbers that follow a pattern. Complete all the patterns in the table.

Move the correct answer to each box. Each answer may be used more than once. Not all answers will be used.

4

5

6

7

8

10

12

16

2	4	<div>6</div>	8
3	6	9	<div>12</div>
4	<div>8</div>	12	16
<div>5</div>	10	15	20

Scoring Rubric	
Score	Description
1	Student selects the following numbers for the gaps: Gap 1: 6 Gap 2: 12 Gap 3: 8 Gap 4: 5
0	The response is incorrect or irrelevant.

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
21	3.NBT.A	3.NBT.A.2	1

What is $329 + 473$?

Enter your answer in the space provided.

802

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1	2	3
4	5	6
7	8	9
	0	$\frac{\Box}{\Box}$
.	-	$\frac{\Box}{\Box}$

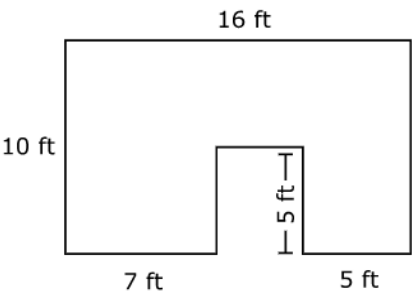
Scoring Rubric	
Score	Description
1	Student enters 802. Equivalent numbers are acceptable. $329 + 473 = 802$
0	The response is incorrect or irrelevant.

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
22	3.MD.C	3.MD.C.8	3

The dimensions of a patio, in feet (ft), are shown.



What is the perimeter, in feet, of the patio?

Enter your answer in the space provided.

62 feet

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1	2	3
4	5	6
7	8	9
	0	<div></div>
.	-	<div></div>

Scoring Rubric	
Score	Description
1	The student entered 62 feet or any equivalent value, providing evidence of the ability to solve a mathematical problem involving the perimeter of a plane figure.
0	The response is incorrect or irrelevant.

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
23	3.OA.B	3.OA.B.6	3

Two equations are given.

$$45 \div 9 = \square$$

$$\square \times 9 = 45$$

Is the missing number the same for both equations?

- ☐ A. Yes, because both equations use the same given numbers
- ☒ B. Yes, because the missing quotient will be equal to the missing factor
- ☐ C. No, because the equations do not use the same operation
- ☐ D. No, because the missing number is in a different part of each equation

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
24	3.MD.A	3.MD.A.2	3

Jane had 15 liters (L) of paint in a bucket. She poured all the paint from the bucket into 3 smaller containers. She poured the same amount of paint into each smaller container.

How much paint, in liters, did Jane pour into each of the smaller containers?

- ☐ A. 3 L
- ☒ B. 5 L
- ☐ C. 12 L
- ☐ D. 18 L

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
25	3.OA.A	3.OA.A.3	2

There are 42 volleyball players on 7 teams. Each team has the same number of players.

How many players are on each team?

Enter your answer in the space provided.

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1	2	3
4	5	6
7	8	9
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Scoring Rubric	
Score	Description
1	The student entered 6 or any equivalent value, providing evidence of the ability to solve word problems involving division within 100.
0	The response is incorrect or irrelevant.

(1 Point)

Grade 3 Math Sample Test

Item Number	Cluster	Content Standard	DOK
26	3.OA.A	3.OA.A.3	2

Molly has 5 bags of crayons. Each bag has 8 crayons.

Create a multiplication equation that shows the number of crayons Molly has in total?

Enter your answer in the space provided.

$5 \times 8 = 40$

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7	8	9	<	=	>	
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.	−					

Scoring Rubric	
Score	Description
1	Student response is $5 \times 8 = 40$ or $8 \times 5 = 40$. Note: Equivalent equations using multiplication and numbers equivalent to 5, 8, and 40 are acceptable.
0	The response is incorrect or irrelevant.

(1 Point)