MCAP Maryland Comprehensive Assessment Program

Practice Test Answer and Alignment Document
Mathematics: Grade 4
Online

The following pages include the answer keys for all machine-scored items. A sample student response for the top score is included for all hand-scored constructed response items.

- Some answer keys include one possible sample student response. Other valid methods for solving the problem can earn full credit unless a specific method is required by the item.
- In items where the scores are awarded for full and partial credit, the definition of partial credit will be confirmed during range-finding (reviewing sets of real student work).
- If students make a computation error, they can still earn points for reasoning or modeling.

Section 1

Item Number	Answer Key	Evidence Statement Key/ Content Scope
1.	C	4.NBT.B.6
2.	D, F	4.NF.B.3b
3.	10	4.OA.A.3-1
4.	9	4.MD.A.3
5.	800000	4.NBT.A.3
6.	D	4.NF.C.7
7.	$40 = 8 \times 5$ or equivalent valid equation that includes only the numbers 5, 8, and 40 or an equation equivalent to $40 = 8 \times 5$ but with a variable or question mark in place of the 40	4.OA.A.1-2
8.	D	4.NF.B.4c

Item Number	Answer Key	Evidence Statement Key/ Content Scope
9.	In the first shape, the dashed line appears to be a line of symmetry. In the second shape, the dashed line does **not** appear to be a line of symmetry. In the third shape, the dashed line appears to be a line of symmetry.	4.G.A.3
10.	$\frac{2}{8}$ or equivalent	4.NF.B.3d
11.	In the area model, there are two rows. In the first row, the number [200] goes in the box on the left and the number [60] goes in the box on the right. In the second row, the number [160] goes in the box on the left and the number [48] goes in the box on the right. $26 \times 18 = [468]$.	4.NBT.B.5-2
12.	2.05	4.NF.C.6

Section 2

Item Number	Answer Key	Evidence Statement Key/ Content Scope
1.	D	4.M.1 4.MD.C.7 4.M.1-3
2.	B, E	4.R.3 4.NBT.A.3
3.	**Sample Top Score Response** The student divided correctly, but 0.20 hour is not the same as 20 minutes. 0.20 hour is $\frac{2}{10}$ of an hour and 20 minutes is $\frac{1}{3}$ of an hour. Before dividing by 10, the student could have changed 2 hours to 120 minutes. 120 minutes $\div 10 = 12$ minutes. So it takes 12 minutes for the train to go around the museum 1 time. **Refer to the Holistic Rubric for 3-Point Reasoning Constructed Response Items for score point information.**	4.R.2 4.NF.C.6 4.MD.A.2
4.	C	4.M.1 4.MD.B.4 4.M.1-1

Item Number	Answer Key	Evidence Statement Key/ Content Scope
5.	**Sample Top Score Response** The perimeter of the floor is $18 + 14 + 18 + 14 = 64$ feet. The width of the two doors needs to be subtracted. There are 2 doors with a width of 3 feet. The total width is $2 \times 3 = 6$ feet. So the length of trim, in feet, that is needed is $64 - 6 = 58$. The length of each piece of trim is 8 feet. $58 \div 8 = 7\frac{1}{4}$ feet, so the contractor needs to buy 8 pieces of trim. The total cost, in dollars, is $8 \times 11 = 88$. **Refer to the Holistic Rubric for 3-Point Modeling Constructed Response Items for score point information.**	4.M.1 4.OA.A.3-2 4.MD.A.3 4.M.1-4
6.	The claim is incorrect because the student only compared the [numerators]. The student should have compared the number of [shaded parts] and the [size of each part] in each model.	4.R.1 4.NF.A.2

Section 3

Item Number	Answer Key	Evidence Statement Key/ Content Scope
1.	A	4.MD.C.5b
2.	$\frac{38}{100}$ or equivalent	4.NF.C.5
3.	A, E	4.NBT.A.2
4.	$2\frac{1}{2}$ or equivalent	4.NF.B.3c
5.	The problem in the first row could **not** be solved using 30 x 40. The problem in the second row could be solved using 30 x 40. The problem in the third row could be solved using 30 x 40.	4.OA.A.2
6.	The shaded parts of the models show that the fraction $\left[\frac{1}{3}\right]$ is equivalent to the fraction $\left[\frac{4}{12}\right]$ because $\left[\frac{4}{12} = \frac{1 \times 4}{3 \times 4}\right]$.	4.NF.A.1
7.	$\frac{4}{8}$ or equivalent	4.MD.B.4
8.	The first model should be used to shade the correct answer. Any three of the four sections can be selected.	4.NF.B.4a
9.	3, [10], [17], [24]	4.OA.C.5
10.	D	4.NF.A.2
11.	2071	4.NBT.B.4-2

Section 4

Item Number	Answer Key	Evidence Statement Key/ Content Scope
1.	D	4.M.1 4.MD.B.4 4.M.1-2
2.	C, E	4.R.4 4.OA.A.3-1
3.	**Sample Top Score Response** The total time exercised from Sunday to Thursday needs to be subtracted from $3\frac{5}{10}$. $3\frac{5}{10}-\frac{6}{10}=2\frac{9}{10}$ $2\frac{9}{10}-\frac{3}{10}=2\frac{6}{10}$ $2\frac{6}{10}-3\times\frac{4}{10}=\frac{26}{10}-\frac{12}{10}=\frac{14}{10}$ The athlete needs to exercise $1\frac{4}{10}$ more hours this week. **Refer to the Holistic Rubric for 3-Point Modeling Constructed Response Items for score point information.**	4.M.1 4.NF.B.3d 4.NF.B.4c 4.M.1-4
4.	First, the custodian should [multiply the length by the width]. Next, the custodian should [divide the result by 2].	4.M.1 4.MD.A.3 4.M.1-3

5.	**<u>Sample Top Score Response</u>** The model could be used to find the partial products. 70 and 8 are each multiplied by 50 and 4. 3500 is the product of 50 and 70. 400 is the product of 50 and 8. 280 is the product of 70 and 4. And 32 is the product of 8 and 4. Lastly, the partial products should be added together to get the product of 4212. **Refer to the Holistic Rubric for 3-Point Reasoning Constructed Response Items for score point information.**	4.R.1 4.NBT.B.5-1
6.	B	4.R.2 4.NF.B.3d 4.NF.C.5