MCAP
Maryland Comprehensive Assessment Program

Practice Test Answer and Alignment Document
Mathematics: Grade 5
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.	305	5.MD.C.5c
2.	$\dfrac{8}{21}$	5.NF.A.1-2
3.	36.008	5.NBT.A.3a
4.	A	5.NF.B.6
5.	Quotient: [161] Remainder: [15]	5.NBT.B.6
6.	C, E	5.NF.B.7a
7.	C	5.OA.A.2
8.	$1\dfrac{5}{8}$ or equivalent	5.NF.A.2
9.	C	5.NBT.B.5
10.	18500	5.MD.A.1

Item Number	Answer Key	Evidence Statement Key/ Content Scope
11.	The student should plot points at (3, 5), (6, 4), and (0, 2).	5.G.A.1/5.G.A.2
12.	B	5.NF.B.3

Section 2

Item Number	Answer Key	Evidence Statement Key/ Content Scope
1.	B	5.R.4 5.NBT.B.7-2 5.NBT.B.7-3
2.	A, C, E	5.M.1 5.M.1-1 5.OA.A.2
3.	**Sample Top Score Response** First example: $1005 \div 15 = 67$. Since 67 doesn't end in 5, the claim is incorrect. Second example: $4235 \div 15 = 282\frac{1}{3}$. Since $282\frac{1}{3}$ doesn't end in 5 and has a remainder, the claim is incorrect. **Refer to the Holistic Rubric for 3-Point Reasoning Constructed Response Items for score point information.**	5.R.3 5.NBT.B.6
4.	A	5.M.1 5.NF.B.4a 5.M.1-2

Item Number	Answer Key	Evidence Statement Key/ Content Scope
5.	**<u>Sample Top Score Response</u>** 10 cups of walnuts can be used to make $10 \div \frac{1}{6} = 60$ servings of trail mix. 12 cups of pretzels can be used to make $12 \div \frac{1}{4} = 48$ servings of trail mix. 9 cups of apricots can be used to make $9 \div \frac{1}{8} = 72$ servings of trail mix. The least of these values is 48, so a total of 48 servings of trail mix can be made. Kasey will use all the pretzels. 48 servings of trail mix require $48 \times \frac{1}{6} = 8$ cups of walnuts, so Kasey will have $10 - 8 = 2$ cups of walnuts left over. 48 servings of trail mix require $48 \times \frac{1}{8} = 6$ cups of apricots, so Kasey will have $9 - 6 = 3$ cups of apricots left over. **Refer to the Holistic Rubric for 4-Point Modeling Constructed Response Items for score point information.**	5.M.1 5.NF.B.7c 5.M.1-4
6.	D	5.R.2 5.NF.A.1-4

Section 3

Item Number	Answer Key	Evidence Statement Key/ Content Scope
1.	B	5.NF.A.1-4
2.	2400 cubic inches	5.MD.C.5b
3.	Each term in pattern Q is [3 times] the same term in pattern P. When the value of a term in P is 24, then the value of the term in Q will be [72].	5.OA.B.3
4.	$\frac{1}{12}$ or equivalent	5.NF.B.7c
5.	15.374 [>] 15.347 25.502 [<] 25.52 35.716 [>] 35.671 45.280 [=] 45.28	5.NBT.A.3b
6.	C	5.NF.B.4a
7.	$5\frac{1}{4}$ or equivalent	5.MD.B.2
8.	B, C, F	5.NBT.B.7-3
9.	$6 \; [\div] \frac{1}{3} = [18]$	5.NF.B.7b
10.	The student should select the 8 in the fourth box from the left.	5.NBT.A.1
11.	For the shape "Parallelogram," the cell under "At least two side lengths must be the same" should be selected. For the shape "Quadrilateral," the cell under "The side lengths could all be different" should be selected. For the shape "Rhombus," the cell under "At least two side lengths must be the same" should be selected.	5.G.B.4

Section 4

Item Number	Answer Key	Evidence Statement Key/ Content Scope
1.	C	5.M.1 5.NF.B.4b 5.M.1-3 5.NF.A.1-3
2.	C, D	5.R.3 5.G.B.4
3.	**<u>Sample Top Score Response</u>** The volume of the top box is $8 \times 24 \times 6 = 1152$ cubic inches. The volume of the bottom box is $20 \times 24 \times 6 = 2880$ cubic inches. The total volume of the boxes is $1152 + 2880 = 4032$ cubic inches. **Refer to the Holistic Rubric for 3-Point Modeling Constructed Response Items for score point information.**	5.M.1 5.MD.C.5c 5.M.1-4
4.	B	5.R.1 5.NF.B.4a 5.NF.B.5a 5.NF.B.5b

Item Number	Answer Key	Evidence Statement Key/ Content Scope
5.	**Sample Top Score Response** The 20 basic calculators require a total of $20 \times 3 = 60$ batteries. The 12 advanced calculators require a total of $12 \times 4 = 48$ batteries. In total, the teacher needs $60 + 48 = 108$ batteries. Dividing, $108 \div 24 = 4.5$. Therefore, the teacher needs to buy 5 packages of batteries. The teacher's thinking that 6 packages of batteries is incorrect. 5 packages contain a total of $5 \times 24 = 120$ batteries, so the teacher will have $120 - 108 = 12$ batteries left over. **Refer to the Holistic Rubric for 4-Point Reasoning Constructed Response Items for score point information.**	5.R.4 5.NBT.B.5 5.NBT.B.6
6.	A	5.M.1 5.NBT.B.7-1 5.M.1-3