

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.	A	4.NF.A.2
2.	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
3.	D	4.M.1 4.MD.C.7 4.M.1-3
4.	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

Item Number	Answer Key	Evidence Statement Key/ Content Scope
5.	<p><u>Sample Top Score Response</u></p> <p>The student divided correctly, but 0.20 hour is not the same as 20 minutes.</p> <p>0.20 hour is $\frac{2}{10}$ of an hour and 20 minutes is $\frac{1}{3}$ of an hour.</p> <p>Before dividing by 10, the student could have changed 2 hours to 120 minutes.</p> <p>$120 \text{ minutes} \div 10 = 12 \text{ minutes}$.</p> <p>So it takes 12 minutes for the train to go around the museum 1 time.</p> <p>Refer to the Holistic Rubric for 3-Point Reasoning Constructed Response Items for score point information.</p>	<p>4.R.2 4.NF.C.6 4.MD.A.2</p>
6.	$2\frac{1}{2}$ or equivalent	4.NF.B.3c
7.	A, B, E	4.M.1 4.MD.B.4 4.M.1-1
8.	D	4.NF.B.4c
9.	10	4.OA.A.3-1

Section 2

Item Number	Answer Key	Evidence Statement Key/ Content Scope
1.	C	4.NBT.B.6
2.	D, F	4.NF.B.3b
3.	C	4.R.2 4.NF.C.5
4.	800000	4.NBT.A.3
5.	<p><u>Sample Top Score Response</u></p> <p>The perimeter of the floor is $18 + 14 + 18 + 14 = 64$ feet.</p> <p>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 baseboards, in feet, that are needed is $64 - 6 = 58$.</p> <p>The length of each baseboard is 8 feet. $58 \div 8 = 7\frac{1}{4}$ feet, so the contractor needs to buy 8 baseboards.</p> <p>The total cost, in dollars, is $8 \times 11 = 88$.</p> <p>Refer to the Holistic Rubric for 3-Point Modeling Constructed Response Items for score point information.</p>	4.M.1 4.OA.A.3-2 4.MD.A.3 4.M.1-4
6.	<p>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 $\left[\frac{1}{3} = \frac{1 \times 4}{3 \times 4}\right]$.</p>	4.NF.A.1
7.	C, E	4.R.4 4.OA.A.3-2
8.	$\frac{4}{8}$ or equivalent	4.MD.B.4

Item Number	Answer Key	Evidence Statement Key/ Content Scope
9.	40 = 8 × 5 or equivalent valid equation that includes only the numbers 5, 8, and 40	4.OA.A.1-2

Section 3

Item Number	Answer Key	Evidence Statement Key/ Content Scope
1.	A	4.MD.C.5b
2.	2.05	4.NF.C.6
3.	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
4.	$\frac{2}{8}$ or equivalent	4.NF.B.3d
5.	<p><u>Sample Top Score Response</u></p> <p>The model could be used to find the partial products.</p> <p>70 and 8 are each multiplied by 50 and 4.</p> <p>3500 is the product of 50 and 70.</p> <p>400 is the product of 50 and 8. 280 is the product of 70 and 4.</p> <p>And 32 is the product of 8 and 4.</p> <p>Lastly, the partial products should be added together to get the product of 4,212.</p> <p>Refer to the Holistic Rubric for 3-Point Reasoning Constructed Response Items for score point information.</p>	4.R.1 4.NBT.B.5-1
6.	D	4.M.1 4.MD.B.4 4.M.1-2
7.	<p>The problem in the first row could not be solved using 30×40.</p> <p>The problem in the second row could be solved using 30×40.</p> <p>The problem in the third row could not be solved using 30×40.</p> <p>The problem in the fourth row could be solved using 30×40.</p>	4.OA.A.2

Item Number	Answer Key	Evidence Statement Key/ Content Scope
8.	A, E	4.NBT.A.2
9.	The first model should be used to shade the correct answer. Any three of the four sections can be selected.	4.NF.B.4a

Section 4

Item Number	Answer Key	Evidence Statement Key/ Content Scope
1.	D	4.NF.C.7
2.	3, [10], [17], [24]	4.OA.C.5
3.	B, E	4.R.3 4.NBT.A.3
4.	A	4.MD.A.3
5.	<p><u>Sample Top Score Response</u></p> <p>The total time exercised from Sunday to Thursday needs to be subtracted from $3\frac{5}{10}$.</p> $3\frac{5}{10} - \frac{6}{10} = 2\frac{9}{10}$ $2\frac{9}{10} - \frac{3}{10} = 2\frac{6}{10}$ $2\frac{6}{10} - 3 \times \frac{4}{10} = \frac{26}{10} - \frac{12}{10} = \frac{14}{10}$ <p>The athlete needs to exercise $1\frac{4}{10}$ more hours this week.</p> <p>Refer to the Holistic Rubric for 3-Point Modeling Constructed Response Items for score point information.</p>	<p>4.M.1 4.NF.B.3d 4.NF.B.4c 4.M.1-4</p>
6.	2071	4.NBT.B.4-2
7.	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
8.	$\frac{38}{100}$ or equivalent	4.NF.C.5