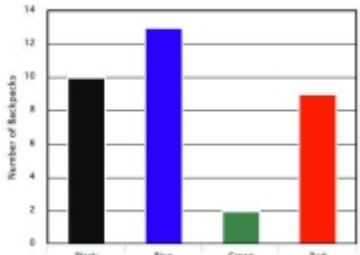

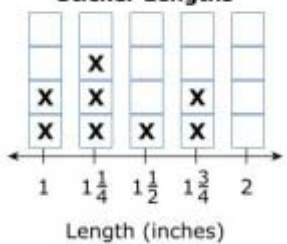
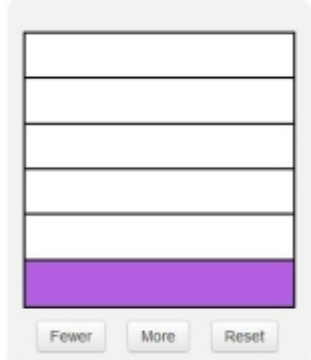
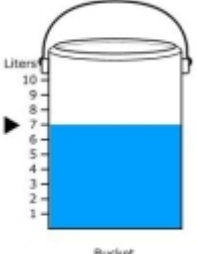


Grade 3 Mathematics Computer-Based Practice Test Answer Key


The following pages include the answer key for all machine-scored items, followed by rubrics for the hand-scored items. The rubrics also show sample student responses; 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, students can still earn points for reasoning or modeling even if they make a computation error.

Session 1

Item Number	Item Type	Answer Key	Number of Points	Standard												
1	SA	<p style="text-align: center;">Backpack Colors</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Backpack Colors Data</caption> <thead> <tr> <th>Color</th> <th>Number of Backpacks</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>10</td> </tr> <tr> <td>Blue</td> <td>13</td> </tr> <tr> <td>Green</td> <td>2</td> </tr> <tr> <td>Red</td> <td>9</td> </tr> </tbody> </table>	Color	Number of Backpacks	Black	10	Blue	13	Green	2	Red	9	1	3.MD.B.03		
Color	Number of Backpacks															
Black	10															
Blue	13															
Green	2															
Red	9															
2	SA		1	3.NF.A.02												
3	SA	<p style="text-align: center;">Sticker Lengths</p>  <p style="text-align: center;">Length (inches)</p>	1	3.MD.B.04												
4	SR	C, D	1	3.OA.B.05												
5	SR	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Statement</th> <th style="width: 10%;">True</th> <th style="width: 20%;">False</th> </tr> </thead> <tbody> <tr> <td>The length of each side of a square tile is 10 inches.</td> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input checked="" type="radio"/></td> </tr> <tr> <td>The area of each square tile is 25 square inches.</td> <td style="text-align: center;"><input checked="" type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> </tr> <tr> <td>The design will have an area of 75 square inches. The builder will need 3 of the square tiles to make the design without gaps or overlaps.</td> <td style="text-align: center;"><input checked="" type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> </tr> </tbody> </table>	Statement	True	False	The length of each side of a square tile is 10 inches.	<input type="radio"/>	<input checked="" type="radio"/>	The area of each square tile is 25 square inches.	<input checked="" type="radio"/>	<input type="radio"/>	The design will have an area of 75 square inches. The builder will need 3 of the square tiles to make the design without gaps or overlaps.	<input checked="" type="radio"/>	<input type="radio"/>	1	3.MD.C.05
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6	SA		1	3.G.A.02												

7	SA		1	3.MD.A.02
8	SR	B	1	3.OA.D.08

Session 2

Item Number	Item Type	Answer Key	Number of Points	Standard														
1	SA	6	1	3.OA.C.07														
2	SA	$A = 3 \times 4$ OR $A = 4 \times 3$	1	3.MD.C.07														
3	SA		1	3.NF.A.03														
4	SA	<table border="1" data-bbox="483 1081 1133 1470"> <thead> <tr> <th colspan="2">Shells Collected</th> </tr> <tr> <th>Student</th> <th>Number of Shells</th> </tr> </thead> <tbody> <tr> <td>Mary</td> <td></td> </tr> <tr> <td>Tim</td> <td></td> </tr> <tr> <td>Ethan</td> <td></td> </tr> <tr> <td>Kristen</td> <td></td> </tr> </tbody> </table> <table border="1" data-bbox="901 1239 1133 1323"> <thead> <tr> <th>Key</th> </tr> </thead> <tbody> <tr> <td>Each represents 4 shells.</td> </tr> </tbody> </table>	Shells Collected		Student	Number of Shells	Mary		Tim		Ethan		Kristen		Key	Each represents 4 shells.	1	3.MD.B.03
Shells Collected																		
Student	Number of Shells																	
Mary																		
Tim																		
Ethan																		
Kristen																		
Key																		
Each represents 4 shells.																		
5	SA	$\begin{array}{r} 945 \\ - 298 \\ \hline 647 \end{array}$	1	3.NBT.A.02														
6	SA	$4\frac{1}{2}$ (inches) or equivalent	1	3.MD.B.04														
7	SR	D	1	3.G.A.01														
8	CR	See Rubric	3	3.NF.A.01														

Rubric is on the next page.

Scoring Guide	
Score	Description
3	The student response demonstrates an exemplary understanding of the Numbers and Operations - Fractions concepts involved in understanding a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts and understanding a fraction a/b as the quantity formed by a parts of size $1/b$. Given a number of fractional parts, the student correctly determines the number of wholes and, given a number of wholes, the student correctly determines the number of fractional parts.
2	The student response demonstrates a good understanding of the Numbers and Operations - Fractions concepts involved in understanding a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts and understanding a fraction a/b as the quantity formed by a parts of size $1/b$. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result, the response merits 2 points.
1	The student response demonstrates a minimal understanding of the Number and Operations - Fractions concepts involved in understanding a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts and understanding a fraction a/b as the quantity formed by a parts of size $1/b$. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 1 point.
0	The student response contains insufficient evidence of an understanding of Number and Operations - Fractions concepts involved in understanding a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts and understanding a fraction a/b as the quantity formed by a parts of size $1/b$ to merit any points.

Sample Response:

A. 3 (oranges); There are 4 fourths for each orange. $4 + 4 + 4 = 12$

B. 32 (fourths); Each orange has 4 fourths. $8 \times 4 = 32$

C. Apple sixths; $8 \times 6 = 48$; $48 > 32$

