

Virginia

Standards of Learning Guided Practice Suggestions

For use with the Grade 3 Mathematics
Practice Items in TestNav™ 8

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Change Log

Updates to this document will be reflected in the table.

Change Log		
Version	Date	Description
V.4	10/21/2016	General information updated.
V.3	09/16/2016	Update Available Tools
V.2	07/19/2016	Updated information in Sample A and Section 1, Question 1. Removed <i>Introduction to TestNav</i> 8 page number references in this document and reformatted table information.
V.1	03/30/2016	Original Document Posted

Introduction to TestNav™ 8: MC/TEI Document

The [*Introduction to TestNav 8: MC/TEI*](#) document serves as an introduction to the new online navigation, tools, accessibility features, and overall functionality and appearance of TestNav 8. It is highly recommended that teachers (or other adults) read the *Introduction to TestNav 8: MC/TEI* document prior to reading this guide, the *Guided Practice Suggestions* for the Grade 3 Mathematics practice item set.

Reading the *Introduction to TestNav 8: MC/TEI* document will give teachers an understanding of the features of TestNav 8 prior to working with students. In part, the document provides information on:

- opening the practice item sets within the required TestNav 8 Application,
- navigating through the practice item sets,
- answering technology-enhanced items (TEI) and multiple-choice items,
- using the online tools, and
- using the accessibility features available in TestNav 8.

This important information should be used in conjunction with the information found in this guide.

Guided Practice Suggestions

This guide provides specific item information for each question in the Grade 3 Mathematics practice item set in table format. Along with the item information in the table, there is a column titled “Guided Practice Suggestions.” This column contains information for teachers as they guide students through the practice items. For instance, guided practice suggestions can state, “Use the eliminator tool to place a red ‘X’ on the answers that are not correct,” or, “Make sure students know how to select draggers and place them in the empty boxes using their mouse, keypad, or touchscreen.” Following the suggestions in the table will ensure that students are exposed to all of the different tools within TestNav 8, the different functionality features of TEI, and the common messages that may appear as students complete TEI.

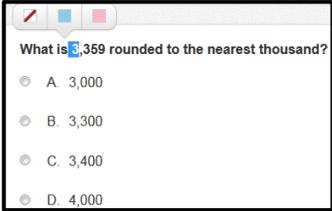
Grade 3 Mathematics Practice Item Information and Recommended Guided Practice Suggestions

General Note about the Grade 3 Mathematics Practice Items: Since grade 3 students will be taking a computer adaptive version of the mathematics Standards of Learning test, there is no mention of using the *Bookmark* button to review items and no reference to the *Review* button to determine the status of questions. However, information about when a TEI will be considered “Answered” is provided in the table since this determines when the *forward arrow* button becomes active in the computer adaptive test (CAT).

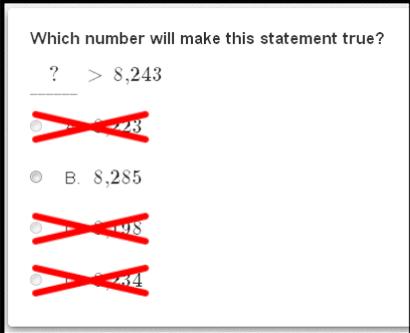
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
Section 1 (Questions 1-20)				
The questions in the first section of the test are numbered sequentially from 1 to 20.				
				<p>Throughout the practice item set, navigate forward and backward by selecting an arrow in the top left corner of the screen. The forward arrow will navigate to the <i>Next</i> screen, and the backward arrow will navigate to the <i>Previous</i> screen. An arrow with a blue background indicates the button is active and can be selected.</p> <p>(On the actual computer adaptive test, only the forward arrow will be active.)</p> 

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	1	TEI Fill-in-the-Blank	705,003 or 705003	<p>Have students attempt to enter a character that cannot be used as part of the answer. A message will appear that states:</p> <p style="text-align: center;">You cannot use that character.</p> <p>This message will remain on the screen for approximately three seconds.</p> <p>Tell students that the answer does not need to be as long as the response box, and a blank space can never be entered into a response box. Tell students that answers with four or more digits will be scored as correct with or without the use of commas. If a comma is used, it must be in the correct location within the number.</p>
1	2	TEI Drag and Drop	Answers from top to bottom: Ten thousands; Hundreds	<p>Have students select draggers and place them in the empty boxes using the mouse, keypad, or touchscreen.</p> <p>Selecting a dragger and moving it to the empty box causes the remaining draggers to shift location in the answer option area.</p> <p>Have students practice moving draggers back to the gray box. Draggers will go back to their original location when returned to the gray box.</p> <p>This item will not be considered “Answered” until each box has an answer in it.</p>

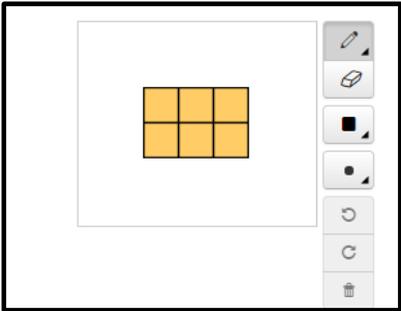
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	3	MC	A 3,000	<p>Have students practice zooming in to look at the question on the screen, and then have them zoom out.</p> <p>On a PC or Chromebook, press the CTRL and + keys at the same time to zoom in. Press the CTRL and – keys at the same time to zoom out. Press the CTRL and 0 (zero) keys at the same time to return to the default screen setting.</p> <p>On a Mac, press the COMMAND and + keys at the same time to zoom in. Press the COMMAND and – keys at the same time to zoom out. Press the COMMAND and 0 (zero) keys at the same time to return to the default screen setting.</p> <p>On a touchscreen, have students touch two points on the screen and then move their fingers away from each other to zoom in. Touch two points on the screen and then move those fingers toward each other to zoom out.</p> <p>As students are practicing how to zoom in and out, make sure they are doing so within reason. If students zoom in too far, they may not be able to see all of the information necessary to answer the question. If students zoom out too far, they may not be able to clearly see details of the question on the screen. It should also be noted that zooming in and out on the screen may cause the text wrapping to change. Remind students that they should only use this feature when necessary.</p>

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	3 (Cont.)			<p>If students are using a touchscreen and the item has a Drawing Interaction tool, they must touch two points located outside the Drawing Interaction window in order to zoom in or out. To drag the screen to the right or to the left, the student must be touching the screen outside the Drawing Interaction window.</p> <p>Before students go to the next question, make sure they return to the default screen.</p> <p>Next, have students use the highlighter tool to highlight the number in the thousands place. It may be easier to highlight the number if the student zooms in on the question first.</p> <p>To highlight using a keyboard, place the pointer next to the first “3,” left click, hold down, and drag over the number. Then select the highlighter color.* To remove the highlight, left click, hold down, and drag over the “3.” Then select the white box on the left with the red line.</p> <p>On a touchscreen, hold down on the number with a finger, and adjust the area to be highlighted with the blue anchors. Then select the highlighter color.* To remove the highlight, hold down on the number with a finger, then select the white box on the left with the red line.</p> 

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	3 (Cont.)			<p data-bbox="1003 237 1787 310">On a touchscreen, the following message may appear when students highlight text.</p> <div data-bbox="1291 321 1549 386" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> Copy Define Share... </div> <p data-bbox="1003 415 1843 561">In the practice items, selecting one of the options listed will open a new window and direct students to the internet. This will not occur in the actual testing environment; selecting an option will not direct the students to another screen.</p> <p data-bbox="1003 610 1822 870">*Pink and blue are the two highlighter colors available when the foreground and background settings are set to the default (black text on white background). These colors may change when the foreground and background setting is changed. Practice with changing the foreground and background colors will be done on question 16 in Section 2 of this practice item set.</p> <p data-bbox="1003 919 1829 992">Tell students that the highlighter tool will only work on text. It will not work on art (images/pictures).</p>

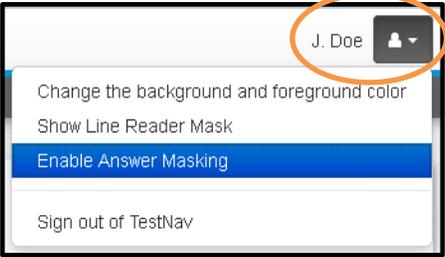
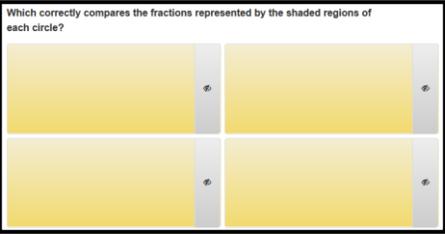
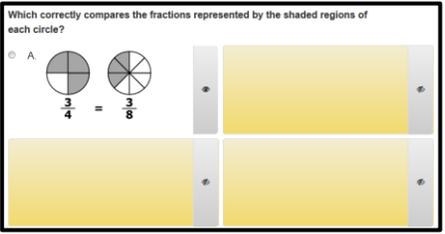
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	4	MC	B 8,285	<p>When a tool in the toolbar is active, it will be dark gray. In the picture below, the pointer is active. Have students select the eliminator tool located in the toolbar and then place a red “X” on the answers that are not correct.</p>  <p>To remove an “X” keep the eliminator tool active and select the “X” to remove it. Have students practice removing an “X.”</p>  <p>Tell students: Multiple-choice items must be answered in TestNav 8 by selecting the letter of the answer option or the option itself using the mouse, keypad, or touchscreen. On multiple-choice items, once an answer is selected, the item cannot be returned to an unanswered state (no answer selected) unless the student uses the eliminator tool to place an “X” over the selected answer and then deselects the “X.”</p> <p>Remind students that placing an “X” on the incorrect answer choices does not complete the item. A selection must be made with the pointer tool in order for the item to be considered “Answered.”</p>

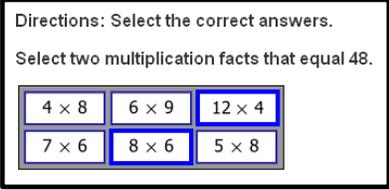
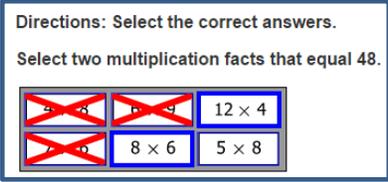
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	5	TEI Drag and Drop	Answers from left to right: X ; 9	<p>Have students try to place an operation symbol into the box on the right. They will not be able to do this. The operation symbols can only be used in the box on the left. Sometimes a restriction is placed on where a dragger can be placed to limit errors.</p> <p>Have students select the number 9. As they move this number, only the box on the right shades blue, indicating this is the only box that will accept this dragger.</p> <p>This item will not be considered “Answered” until each box has an answer in it.</p>

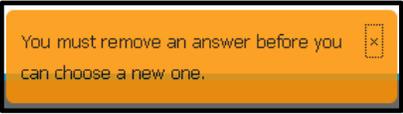
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	6	TEI Hot Spot	Any 22 boxes should be shaded.	<p>Shading parts of a figure is a type of hot spot technology-enhanced item. Tell students that when there are an unspecified number of answers, the question will be considered “Answered” when one answer (or part) has been selected (or shaded). This is so no clue or hint is given as to how many answers are correct (or should be shaded).</p> <p>Have students practice selecting and deselecting an answer (or shaded part). To deselect an answer (or part), it must be selected again.</p> <p>This question also has the Drawing Interaction Tool. The Drawing Interaction Tool is a boxed area that exists on certain mathematics questions. The pencil may be used to make marks, notations, straight lines, or dots on or around artwork or graphs inside the Drawing Interaction area. The student selects the specific tool he/she wants to use, and uses it to help answer the question.</p> 

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	6 (Cont.)			<p>The top tool is the pencil or straight line tool. The arrow in the bottom right corner expands the tool so a student may select free draw or the straight line. A dot may be placed if a student uses their mouse, keypad, or touchscreen. The student would select free draw and use their mouse or keypad to click and release to place a point. If using a touchscreen, the student would use their finger to place a point. </p> <p>The second tool is used to erase selected lines or writing. </p> <p>The third tool allows the markings to be black or green. The arrow in the bottom right corner expands the tool so a student may select the color. </p> <p>The fourth tool allows the students to select the thickness of the markings. The arrow in the bottom right corner expands the tool so a student may select the size. </p> <p>The fifth and sixth tools are to Undo or Redo the most recent markings. </p> <p>The last tool allows all markings to be eliminated at the same time. </p>

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	6 (Cont.)			<p>Have students practice drawing markings and removing them to help answer the question.</p> <p>Students must select the correct answer using the answer options below the Drawing Interaction Tool.</p>

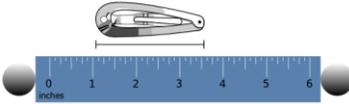
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	7	MC	$B \quad \frac{2}{3} = \frac{8}{12}$	<p>Have students practice using the Answer Masking accessibility feature with this item. Select the user drop-down menu in the top right corner of the screen and select <i>Enable Answer Masking</i> from the menu.</p>  <p>The answer options on multiple-choice items will now be masked as shown in the screenshot.</p>  <p>Students may show or hide each option by selecting the “eye.”</p>  <p>Answer Masking will remain on in each multiple-choice item until it is turned off. To turn off Answer Masking, select the user drop-down menu and select <i>Disable Answer Masking</i>.</p>

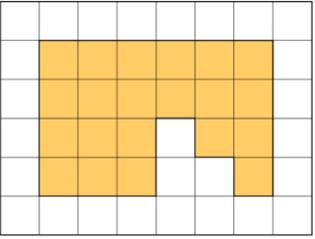
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	8	MC	C 312	<p>To answer this question correctly, the two correct answers in the gray box must be selected. A blue box outlines the answer choice when it is selected, indicating a student has chosen that response as an answer.</p>  <p>Directions: Select the correct answers. Select two multiplication facts that equal 48.</p> <p>4×8 6×9 12×4 7×6 8×6 5×8</p>
1	9	TEI Hot Spot	Both 12×4 and 8×6 should be selected.	<p>In order to deselect an answer and remove the blue box, the answer choice must be selected again. Have students practice selecting and deselecting an answer.</p> <p>The answer eliminator may also be used on this item to eliminate answer options. Have students select the eliminator tool located in the toolbar and then place a red "X" on the answers that are not correct.</p>  <p>Directions: Select the correct answers. Select two multiplication facts that equal 48.</p> <p>4×8 6×9 12×4 7×6 8×6 5×8</p>

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	9 (Cont.)			<p>Remind students that placing an “X” on the incorrect answer choices does not complete the item. A selection must be made with the pointer tool in order for the item to be considered “Answered.”</p> <p>This item also specifies the number of answers a student must select. If a student tries to select more than the number of answers indicated, a message appears in the top right corner of the screen. This message will remain for approximately five seconds unless the “X” is selected to close the message. Have students try to select an additional answer so that they can see this message appear.</p> 
1	10	TEI Fill-in-the-Blank	16	
1	11	MC	D 2×3	
1	12	MC	B $40 \div 5$	
1	13	MC	C $1\frac{2}{5}$	

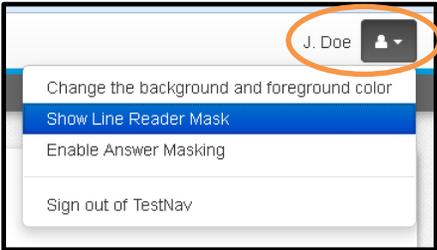
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	14	TEI Drag and Drop	Answers from top to bottom: 7; 8 (which creates the fraction $\frac{7}{8}$)	<p>As soon as a number is selected and moved, both boxes of the fraction shade blue. This indicates that the number can be placed in either box- whichever location the student chooses as the correct location.</p> <p>Have students try to place one dragger “over” another dragger, to show how the top dragger will return to the gray box. If a student wishes to change an answer, the dragger must be moved back to the gray box and another option must be selected and moved into the response box.</p> <p>In order for this question to be considered “Answered” both boxes must contain a number.</p>

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	15	TEI Drag and Drop	<p>The units of money in the response box must be equal to \$1.12.</p> <p>Examples of correct responses include: One dollar bill, a dime, and two pennies OR Four quarters, two nickels, and two pennies</p>	<p>Have students practice dragging money into the response box. If a student changes his mind after selecting and dragging money into the response box, he can select and drag the money back to the gray box. The student may then select another unit of money and drag it into the response box.</p> <p>Let students know that there are several combinations of units of money that may be used to equal \$1.12 and any of these combinations would be scored as correct.</p> <p>Also point out that all units of money except the \$5 bill may be used more than once, but there is a limit to the number of times a dragger may be used.</p> <p>This item will be considered “Answered” once one unit of money has been placed in the response box.</p> <p>Information for teachers: Students would benefit from practice dragging the units of money and using different combinations to represent 12 cents. Ask students to represent 12 cents using only nickels and pennies. Then ask students to represent 12 cents using only pennies. Students will notice they do not have enough pennies available to make the 12 cents using only pennies. Make sure they understand if they run out of the type of coin they planned to use in their answer, they should figure out a different way to show that same amount using another combination.</p>

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	16	MC	A $2\frac{1}{2}$ inches	<p>There are two ruler tools on the top of the screen (). The icon on the left should be used to access the inch ruler and the icon on the right should be used to access the centimeter ruler. Have students select the appropriate ruler for this question, the inch ruler. To move the ruler, select and drag the ruler over to the object to be measured. To rotate the ruler, select and drag an end with the circle. Have students practice moving and rotating the ruler. Selecting the ruler tool icon again will put the ruler tool away; or, select the pointer tool to put it away. Students will use the pointer tool to select the answer after measuring.</p> <div data-bbox="1184 708 1650 976" style="border: 1px solid black; padding: 5px;"> <p>A hairclip is shown.</p>  <p>What is the length of this hairclip to the nearest half inch?</p> <ul style="list-style-type: none"> <input checked="" type="radio"/> A. $2\frac{1}{2}$ inches <input type="radio"/> B. $3\frac{1}{2}$ inches <input type="radio"/> C. 6 inches <input type="radio"/> D. 7 inches </div>

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	17	MC	D Area of 21 square units and perimeter of 24 units	<p>Have students use the eliminator tool to eliminate answer choices with an "X."</p> <div style="border: 1px solid black; padding: 10px;"> <p>What are the area and perimeter of the shaded figure on this grid?</p>  <p><input checked="" type="radio"/> A. Area of 21 square units and perimeter of 24 units</p> <p><input checked="" type="radio"/> B. Area of 21 square units and perimeter of 21 units</p> <p><input checked="" type="radio"/> C. Area of 24 square units and perimeter of 21 units</p> <p><input type="radio"/> D. Area of 21 square units and perimeter of 24 units</p> </div>
1	18	MC	B 18 centimeters	Make sure students select the ruler on the right for this item (the centimeter ruler).
1	19	MC	B 12 feet	
1	20	MC	C 4 square feet	
<p>Section Break Guide students through the End of Section 1 screen and into the second section of the test (see the <i>Introduction to TestNav 8</i> document).</p> <p>Section 2 (Questions 1-16) The questions in the second section of the test are numbered sequentially from 1 to 16.</p>				
2	1	MC	D 8:20	

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	2	MC	A 3 hours	
2	3	MC	D 5: 20 P.M.	
2	4	TEI Drag and Drop	The red bar should be raised to 56°F, the third interval line above the line representing 50°F.	Have students practice and understand the functionality of this item. In order to answer this item, students must select a location on the white part of the thermometer or drag the arrow to the correct location. If a student changes his mind, he may select another location and the bar height will change.
2	5	MC	D The figure of the cube	

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	6	MC	C Square	<p data-bbox="1003 237 1829 345">Have students practice using the Line Reader Mask accessibility feature with this item. Select the user drop-down menu and <i>Show Line Reader Mask</i> from the menu.</p>  <p data-bbox="1003 662 1829 889">The Line Reader Mask will appear over the item. Have students use the diagonal line areas to practice resizing the area covered by the line reader and the window through which content can be seen. Have students use the cross to move just the window through which content can be seen. Hold down on any part of the gray area and drag the tool to move the entire tool.</p>  <p data-bbox="1003 1247 1829 1393">To turn off the Line Reader Mask, select the drop-down menu and select <i>Hide Line Reader Mask</i>. If the student does not turn off the Line Reader Mask, it will automatically turn off when the student navigates away from the item.</p>

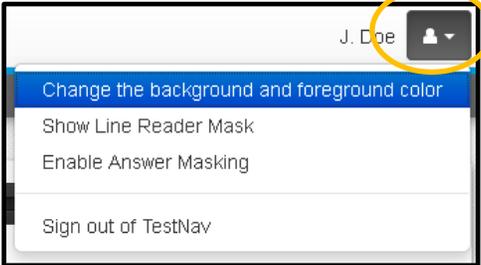
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	7	MC	C the circles	
2	8	TEI Bar Graph	<ul style="list-style-type: none"> • Nancy = 5; the blue bar should reach halfway between intervals 4 and 6. • Bryan = 3; the green bar should reach halfway between intervals 2 and 4. • Kristen = 8; the orange bar should reach interval labeled 8. • Ricardo = 9; the yellow bar should reach halfway between intervals 8 and 10. 	<p>Have students practice dragging each bar to the desired height.</p> <p>Once one bar has been moved, the item will appear as “Answered” even if all of the bars are returned to the original heights.</p>

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	9	TEI Drag and Drop	<p>A correct line plot will include all of the following:</p> <p>Directly above 0: two X's</p> <p>Directly above 1: four X's</p> <p>Directly above 2: one X's</p> <p>Directly above 3: zero X's (blank dragger)</p> <p>Directly above 4: two X's</p> <p>Directly above 5: one X</p>	<p>Have students practice placing draggers to complete the line plot. If a student changes his mind, he may select a dragger and move it back to the gray box and drag another one into the line plot.</p> <p>Make sure students realize that each dragger may be used more than one time.</p> <p>Once a dragger has been placed into each location of the line plot, the item will be considered "Answered." If a student changes his mind about the line plot and returns all draggers to the gray box, the question will appear as "Unanswered."</p> <p>The value for "3" on this line plot is zero. Students must place the empty dragger into the response box above the 3. If students do not place a dragger into the line plot above "3" (as shown by the empty shaded box), the question will not be considered "Answered."</p> <div data-bbox="1255 959 1631 1401" style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Pets Owned</p> </div> <p>This blank dragger must be placed above "3" to indicate zero.</p>

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	10	TEI Drag and Drop	From left to right the bars should be labeled in this order: Olivia; Luke; Jacob; Tori	Have students select and drag answers from the gray box to the correct locations. In order for the item to be considered “Answered,” a name must be placed in each box. If a student changes his mind and wishes to replace a name, he should select the name and drag it back to the gray box. The gray box will expand as names are added back to it. Please make sure students are aware of the functionality of this item.
2	11	MC	C 5	<p>Have students use the highlighter tool to select “at least 6” in the question. This will help students focus on the necessary information in the line plot.</p> <div data-bbox="1150 678 1675 867" data-label="Figure"> <p>This line plot shows the number of envelopes Tammie received in the mail on each of ten days.</p> <p style="text-align: center;">Number of Envelopes in the Mail</p> </div>
2	12	MC	C Unlikely, but not impossible	
2	13	MC	A Blue checkmark, Green checkmark, Red checkmark, Blue star, Green star, Red star	

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	14	MC	C Ordered set of cards O Y R	<p>Have students practice zooming in to look at the question on the screen, and then have them zoom out.</p> <p>On a PC or Chromebook, press the CTRL and + keys at the same time to zoom in. Press the CTRL and – keys at the same time to zoom out. Press the CTRL and 0 (zero) keys at the same time to return to the default screen setting.</p> <p>On a Mac, press the COMMAND and + keys at the same time to zoom in. Press the COMMAND and – keys at the same time to zoom out. Press the COMMAND and 0 (zero) keys at the same time to return to the default screen setting.</p> <p>On a touchscreen, have students touch two points on the screen and then move their fingers away from each other to zoom in. Touch two points on the screen and then move those fingers toward each other to zoom out.</p> <p>As students are practicing how to zoom in and out, make sure they are doing so within reason. If students zoom in too far, they may not be able to see all of the information necessary to answer the question. If students zoom out too far, they may not be able to clearly see details of the question on the screen. It should also be noted that zooming in and out on the screen may cause the text wrapping to change. Remind students that they should only use this feature when necessary.</p>

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	14 (Cont.)			<p>If students are using a touchscreen and the item has a Drawing Interaction tool, they must touch two points located outside the Drawing Interaction window in order to zoom in or out. To drag the screen to the right or to the left, the student must be touching the screen outside the Drawing Interaction window.</p> <p>Before students go to the next question, make sure they return to the default screen.</p>
2	15	MC	B $37 + 0 = 37$	

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	16	MC	A 5 + 35	<p data-bbox="1003 237 1845 386">Have students practice using the accessibility feature that allows them to change the background and foreground color. Select the user drop-down menu and <i>Change the background and foreground color</i> from the menu.</p>  <p data-bbox="1003 704 1835 889">There are six different options other than black on white, which is the default setting. Have students select a contrast setting and then the <i>Continue</i> button to enable this feature. This feature could be used by students who would benefit from the use of color contrasting to make text more distinct.</p> <p data-bbox="1003 938 1835 1084">This setting will remain enabled until turned off. To turn off this setting, select the user drop-down menu, select <i>Change the background and foreground color</i>, and then select the button next to the default setting. Then select the <i>Continue</i> button.</p> <p data-bbox="1003 1133 1835 1235">Information for Teachers: This is the end of the practice item set. See the <i>Introduction to TestNav 8</i> document for information on closing TestNav.</p>