

Virginia

Standards of Learning Guided Practice Suggestions

For use with the Grade 5 Mathematics
Practice Items in TestNav™ 8

Table of Contents

Change Log.....	2
<i>Introduction to TestNav™ 8: MC/TEI Document</i>	3
Guided Practice Suggestions.....	3
Grade 5 Mathematics Practice Item Information and Recommended Guided Practice Suggestions	4

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 page 4 to include information about computer adaptive testing. Removed the <i>Review</i> and <i>Bookmark</i> practice from Section 1, Question 5. Updated information for Section 2, Question 6. Removed <i>Introduction to TestNav 8</i> page number references in this document, and reformatted information in the table.
V.1	03/30/2016	Original Document Posted

Introduction to TestNav™ 8 Document

The [*Introduction to TestNav 8: MC/TEI*](#) document serves as an introduction to the new online navigation, online 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* document prior to reading this guide, the *Guided Practice Suggestions* for the Grade 5 Mathematics practice item set.

Reading the *Introduction to TestNav 8* 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 5 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 common messages that may appear as students complete TEI.

Grade 5 Mathematics Practice Item Information and Recommended Guided Practice Suggestions

General Note about the Grade 5 Mathematics Practice Items: Since grade 5 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 1-9): Complete without the use of a calculator.				
				<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. (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 Drag and Drop	Answers must be placed in this order from top to bottom: 0.2 0.5 0.4	<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 an 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>Have students try to place one dragger “over” another dragger. This cannot be done. 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>As soon as a dragger is selected and moved, all of the boxes shade blue. This indicates that the dragger can be placed in any box - whichever location the student chooses as the correct location.</p> <p>This item will not be considered “Answered” until each box has an answer in it.</p>

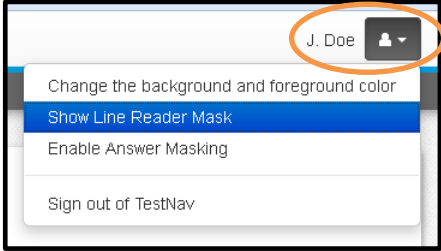
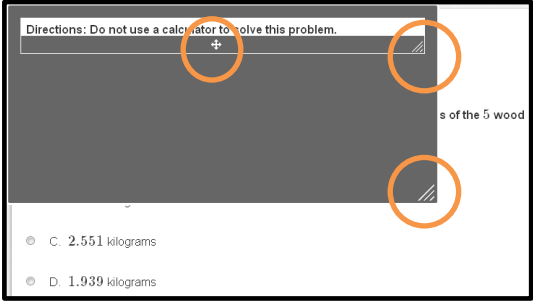
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	2	TEI Drag and Drop	Answers must be placed in this order from top to bottom: $4\frac{4}{5}$ 4.595 4.49 $4\frac{1}{3}$	This item will not be considered “Answered” until each box has an answer in it.

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	3	MC	C 88	<p>Have students use the highlighter tool to highlight the first sentence of the question.</p> <p>To highlight using a keyboard, place the pointer next to the first sentence of the question, left click, hold down, and drag over the sentence. Then select the highlighter color.* To remove the highlight, left click, hold down, and drag over the sentence. Then select the white box on the left with the red line.</p> <p>On a touchscreen, hold down on the sentence 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 sentence with a finger, then select the white box on the left with the red line.</p> <div data-bbox="1188 789 1577 1016" data-label="Image"> </div> <p>On a touchscreen, the following message may appear when students highlight text.</p> <div data-bbox="1306 1133 1562 1198" data-label="Image"> </div> <p>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>

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	3 (Cont.)			<p>* 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 a later item in this practice item set.</p> <p>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	D 4,602	<p>Have students use the eliminator tool located in the toolbar to 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> <div data-bbox="1085 487 1766 883" style="border: 1px solid black; padding: 5px;"> <p>Directions: Do not use a calculator to solve this problem.</p> <p>Destiny is delivering a total of 32,000 flowers to several stores. This table shows the number of these flowers she has delivered to Store P and Store Q.</p> <p style="text-align: center;">Flower Deliveries</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Store</th> <th>Number of Flowers</th> </tr> </thead> <tbody> <tr> <td>Store P</td> <td>18,104</td> </tr> <tr> <td>Store Q</td> <td>9,294</td> </tr> </tbody> </table> <p>The total number of these flowers that Destiny still needs to deliver is —</p> <p>A. 4,602</p> <p>B. 4,602</p> <p>C. 4,602</p> <p><input checked="" type="radio"/> D. 4,602</p> </div> <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>	Store	Number of Flowers	Store P	18,104	Store Q	9,294
Store	Number of Flowers									
Store P	18,104									
Store Q	9,294									

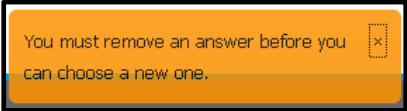
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	5	MC	B 0.603	
1	6	MC	A \$14.73	

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	7	MC	C 2.551 kilograms	<p data-bbox="1016 238 1755 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="1016 630 1793 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="1016 1214 1801 1354">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>


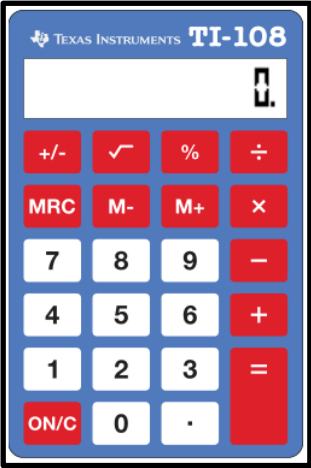
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	8	MC	D $7\frac{5}{8}$ pounds	<p>Have students practice zooming in to look at the question on the screen, and then have them zoom out.</p> <p>On a PC or Chromebook, press the CTRL and + keys at the same time to zoom in. Press the CTRL 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>

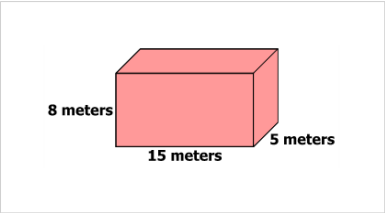



Section	Question	Item Type	Answer Key	Guided Practice Suggestions
1	8 (Cont.)			<p>If students are using a touchscreen and the item has a Drawing Interaction tool, they must touch two points located outside the Drawing Interaction window in order to zoom in or out. To drag the screen to the right or 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>
1	9	MC	A 3 + 6	
<p>Section Break</p> <p>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 1-24)</p> <p>The questions in the second section of the test are numbered sequentially from 1 to 24.</p> <p>A calculator may be used to complete these questions.</p>				




Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	1	TEI Hot Spot	7.534; 7.530; 7.529 All three of these numbers, and only these three numbers, must be selected.	<p>This is a type of hot spot technology-enhanced item. To answer this question correctly, all 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. In order to deselect an answer and remove the blue box, the answer choice must be selected again.</p> <div data-bbox="1131 495 1711 602" style="border: 1px solid black; padding: 5px;"> <p>Directions: Select all the correct answers. Identify each number that will round to 7.53 when rounded to the nearest hundredth.</p> <p>7.534 7.523 7.521 7.530 7.529 7.535</p> </div> <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> <div data-bbox="1113 790 1694 940" style="border: 1px solid black; padding: 5px;"> <p>Directions: Select all the correct answers. Identify each number that will round to 7.53 when rounded to the nearest hundredth.</p> <p>7.534 X X 7.530 7.529 7.535</p> </div> <p>To remove an “X” keep the eliminator tool active and select the “X” to remove it. Have students practice removing an “X.” The eliminator tool may also be used to eliminate an answer that was selected with the pointer tool.</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>

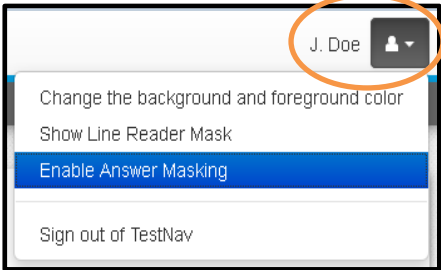
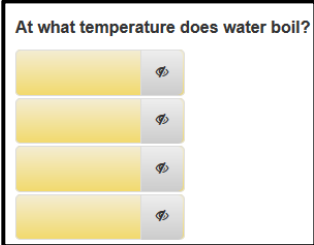
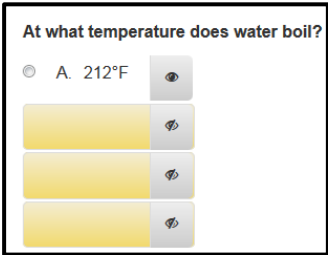
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	1 (Cont.)			<p>Tell students that when there are an unspecified number of answers, the question will be considered “Answered” when one answer has been selected. This is so no clue or hint is given as to how many answers are correct.</p> <p>Have students practice selecting and deselecting an answer.</p>
2	2	TEI Hot Spot	29; 2; 5; 17 All four of these numbers and only these numbers must be selected.	<p>This item 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> 


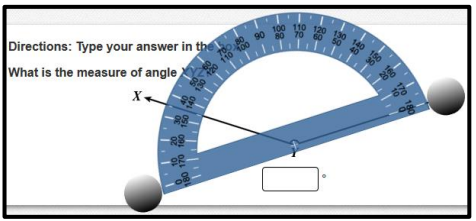

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	3	TEI Hot Spot	<p>These three answers, and only these answers, must be selected:</p> <ul style="list-style-type: none"> • The sum of two even numbers is even. • The difference between an odd number and an even number is odd. • The difference between two odd numbers is even. 	<p>Remind students that when there are an unspecified number of answers, the question will be considered “Answered” when one answer has been selected. This is so no clue or hint is given as to how many answers are correct.</p>

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	4	MC	A 600 cubic meters	<p data-bbox="1016 237 1705 305">Have students practice using the online calculator by selecting the calculator icon.</p>  <p data-bbox="1016 472 1801 613">Once selected, the calculator will appear on the screen. Students can move the calculator across the screen by holding down inside the top of the calculator and dragging it to a new location.</p> <p data-bbox="1016 667 1818 735">Make sure students familiarize themselves with knowing how to select and use the calculator if needed.</p>  <p data-bbox="1016 1252 1797 1320">Selecting the calculator icon again will put the tool away; or, select the pointer tool to put the calculator away.</p>


Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	4 (Cont.)			<p>This question 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> <div data-bbox="1192 527 1698 805" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>A figure is shown.</p>  <p>What is the volume of this figure?</p> </div> <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> <div data-bbox="1131 1094 1287 1149" style="border: 1px solid black; display: inline-block; padding: 2px;">  </div> <p>The second tool is used to erase selected lines or writing.</p> <div data-bbox="1020 1203 1083 1247" style="border: 1px solid black; display: inline-block; padding: 2px;">  </div> <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> <div data-bbox="1020 1369 1180 1411" style="border: 1px solid black; display: inline-block; padding: 2px;">  </div>

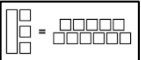
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	4 (Cont.)			<p>The fourth tool allows the students to select the thickness of the markings. The arrow in the bottom right corner expands the tool so a student may select the  size.</p> <p>The fifth and sixth tools are to Undo or Redo the most recent markings. </p> <p>The last tool allows all markings to be eliminated at the same time. </p>
2	5	MC	C Volume	
2	6	TEI Fill-in-the- blank	1,200 or 1200	<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.</p> <p>Let students know that answers with four or more digits will be scored as correct with or without the use of commas.</p>

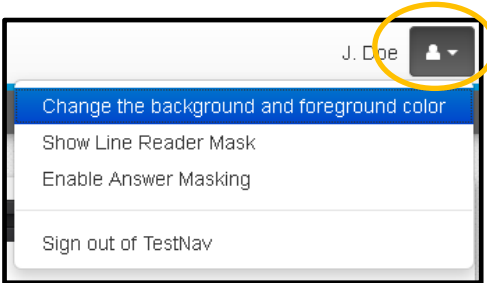
Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	7	MC	A 212 ⁰ F	<p data-bbox="1018 240 1816 381">Have students practice using the Answer Masking accessibility feature with this item. Select the user drop-down menu in the top right corner of the screen and select <i>Enable Answer Masking</i> from the menu.</p>  <p data-bbox="1018 667 1745 732">The answer options will now be masked as shown in the screenshot.</p>  <p data-bbox="1018 979 1745 1044">Students may show or hide each option by selecting the “eye.”</p>  <p data-bbox="1018 1292 1801 1393">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
2	8	MC	B Wayne's line segment shows a radius, and Dani's line segment shows a diameter.	
2	9	MC	D 6: 55	
2	10	TEI Fill-in-the-blank	145 degrees; Answers ranging from 142 to 148 are considered correct.	<p>The protractor tool () should be used to determine the answer. Have students select the protractor tool. To move the protractor, select any place within the boundaries of the blue protractor and drag it to another location. To rotate the protractor, select and drag an end with the circle. Have students practice moving and rotating the protractor. Selecting the protractor tool icon again will put the protractor tool away; or, select the pointer tool to put it away.</p> 
2	11	MC	B Angle 2	Students may want to use practice using the protractor tool on this item.
2	12	MC	C 	
2	13	MC	D Square, triangle, and rhombus	

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	14	MC	C $\frac{4}{8}$	
2	15	TEI Drag and Drop	The stem number must be, from top to bottom, 2, 3, 4, and 5; The stem of 2 must have leaf numbers 5 7 9 (in that order); The stem of 3 must have leaf numbers 0 0 8 8 8 (in that order); The stem of 4 must have no leaf numbers in the plot; The stem of 5 must have leaf numbers 0 4 6 6 (in that order).	As soon as a dragger is selected and moved, all of the boxes in the table shade blue. This indicates that the dragger can be placed in any box - whichever location the student chooses as the correct location. Remind students that this item will appear as “Answered” after one number is placed into the plot. This is so no hint or clue is given on how to complete the stem-and-leaf plot.
2	16	MC	B fair share	

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	17	TEI Drag and Drop	The mean is 35, the median is 32, the mode is 30, and the range is 31.	<p>Tell students that each response box must contain a number in order for this item to be considered “Answered.”</p> <p>This item does not require the use of a ruler tool, but have students practice measuring the dimensions of the rectangle around the words “Mean, Median, Mode, and Range” in centimeters so that they are familiar with its functionality.</p> <p>There are two ruler icons 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.</p> <p>Have students select the centimeter ruler to measure the rectangle. 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.</p> <p>The measurements of the rectangle are approximately 4.8 cm in width and 6.2 cm in length.</p>
2	18	MC	A 21, 24, 29, 25, 27	
2	19	MC	B 256, 64, 16, 4	
2	20	MC	A $y + 45 = 312$	

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	21	MC	B $y + 5 = 6$	
2	22	MC	B 	
2	23	TEI Drag and Drop	The following two answers are acceptable: Left side: 1 cup and 2 balls; Right side: 4 balls OR Left side: 4 balls; Right side: 1 cup and 2 balls	Since the item asks students to model the equation, this item will be considered “Answered” once one cup or counter is placed on the mat. This is so no hint or clue is given on how to model the equation. Please make sure students understand the functionality of this item.

Section	Question	Item Type	Answer Key	Guided Practice Suggestions
2	24	MC	$D \ 8 (1 + 3) = (8 \times 1) + (8 \times 3)$	<p>Have students practice with 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>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>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>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>