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PETROLEUM
INSTITUTE

Individual Certification Programs: ICP™
Tutorials



Welcome to the computer-based exam tutorial for the API 510, 570 and 653 exams.

Page: 1
Section: Introduction

Introduction Time Rem...
00:08:07

0/170
Items Attempted

Finish Test

Test: 510 - Pressure Vessel Inspector Certification

Candidate: DONAHUE Patrick

- 1
- 2 Welcome to the API 510 - Pressure Vessel Inspector Certification
- 3
- 4 Exam Structure
- 5
- 6 This exam contains **170 questions**, presented in random order. You will have **390 minutes** to answer all questions on this exam.
- 7
- 8
- 9 This exam is a two-part exam comprised of closed and open book sections. Following the closed-book section of the exam, there is a scheduled 45-minute break. The open-book section of the exam will start after the break. All code references for the open book portion will be provided on the screen.
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- 13 Before you begin, it is strongly encouraged that you take a few minutes to review the tutorial before proceeding to the exam section. The tutorial provides an overview of the features available to you during the exam.
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- 18 A calculator is available to you on the computer screen during the exam. This is an optional feature as you may use a handheld calculator that can be given to you by the proctors. If you prefer the handheld calculator, please request that now.
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After completing and reviewing all questions within the closed-book section, you can navigate to the scheduled break by clicking the "Finish Section" button in the top right of the screen.

Once the "Finish Section" button is clicked, a sequence of pop-up windows will appear confirming that you want to finish the exam section. Once you confirm your decision to finish the section, you will progress to the scheduled break.

If you respond "No" to the pop-up you will return to the section. Please note that once you submit the section, you may not return at any point. Any unanswered questions will be marked as incorrect.



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Following your scheduled break, the open-book portion of the exam will begin. Should you choose to conclude your scheduled break early, you will be presented with a sequence of pop-ups to confirm your decision.

After completing and reviewing all questions within the open-book section, you can click the "Finish Section" button in the top right corner of the screen.

Once the "Finish Section" button is clicked, a sequence of pop-up windows will appear confirming that you want to finish the open-book section. Once you confirm your decision to finish this section, you will progress to the general comment box.

Click "No" to return to the exam questions. Please note that once you submit the open-book section, you may not return at any point. Any unanswered questions will be marked as incorrect.

To change the color scheme at any time, click on the "Gear" icon in the bottom-left corner of the screen.



To view this tutorial again at any time, click on the "Question Mark" icon at the bottom of the screen.



To begin the tutorial, click "Next" to continue.

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Welcome to the Tutorial

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This tutorial provides a series of screens that orient you to the computer testing environment. You will be instructed on how to use the mouse and the different parts of the screen.

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Notice the timer at the top of the screen. A similar display will appear during the actual exam. To the left of the screen is a numbered list that shows you where you are in the series of examination questions (or in this case, screens of the tutorial). Other screen features are described later in the tutorial.

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Click the 'Next' button to continue.

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Using the Mouse



The mouse pointer moves when you move the mouse around on a surface. Although it can assume different shapes, the arrow shown above is most common. To point with the mouse, move the pointer until it rests on the desired object. To click on an object, point to it and then quickly press and release the left mouse button.

Click the 'Next' button to continue.



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Navigating Through the Exam

Click the **Next** button displayed at the bottom of the screen to move to the next screen or question. Click the **Back** button to move to the previous screen or question.

In addition to the navigation buttons, you can use the numbered buttons displayed on the left side of the screen. Depending on the number of questions in the section, you may need to click on the down arrow to navigate to additional questions.

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The numbered buttons change appearance to indicate different question states: Current, Attempted, Unattempted, and Flagged.

- The current question will be indicated by an arrow-shaped numbered button.
- For all attempted questions, the numbered button will appear darker in color.
- For all unattempted questions, the numbered button will remain the original color.
- Flagged questions will show a flag icon on the numbered button.

Click the 'Next' button to continue.



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Using the Scroll Function

When a question does not fit on a single screen, the following warning will appear at the bottom of the screen.



To scroll through the screen contents, click and drag the scroll bar as necessary or use the scroll wheel on the mouse.

Click the 'Next' button to continue.



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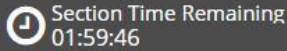
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Time Remaining

The amount of time remaining is displayed at the top of the screen.



Each section of this examination is allocated a specific amount of time, including the Tutorial and Survey. There is also an overall amount of time provided for your full exam appointment. Clicking on the clock will switch between the amount of time remaining in the current section of the exam and the amount of overall time remaining for the full exam appointment.

The most important time display for you as a test taker is the "Section Time Remaining."

Note that, where applicable, an alert box will appear below the exam clock to signal when 30 minutes, 15 minutes, and 5 minutes remain in the current section.

Click the 'Next' button to continue.



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Flagging Questions



You can flag a question as a reminder to go back and check your answer or attempt it later.

To flag a question, click the **Flag** button displayed at the bottom of the exam screen.

Any questions that are flagged for review will show a flag icon on the numbered button, as shown below. Click the **Flag** button again to remove the flag.



Click the 'Next' button to continue.



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Answering Multiple-Choice Questions

This examination uses multiple-choice questions. This type of question has one correct answer.

To complete each multiple-choice question, click on the option that you believe to be the single best answer. Once selected, the option will appear darker in color. To change your response, click on a different option. If you would like to unselect a chosen option, click on it a second time.

Practice answering the multiple-choice question below. Once you have finished practicing, click the 'Next' button to continue.

Of the following biological levels of organization, which represents the smallest or lowest level?

- A
- B
- C
- D



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Answering Multiple-Response Questions

This exam contains multiple-response questions, which has two or more correct answers.

To complete each multiple-response question, click on all the options that you believe to be the correct responses. Once selected, the options will be shaded darker in color. To deselect an option, click on the same option again.

Practice answering the multiple-response question below. Once you have finished practicing, click the 'Next' button to continue.

Which of the following are planets in our Solar System? Select the two that apply.

 Venus Europa Titan Mars

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* These items will be identified by a line that states "This may have more than one correct answer, please select all answers that apply."



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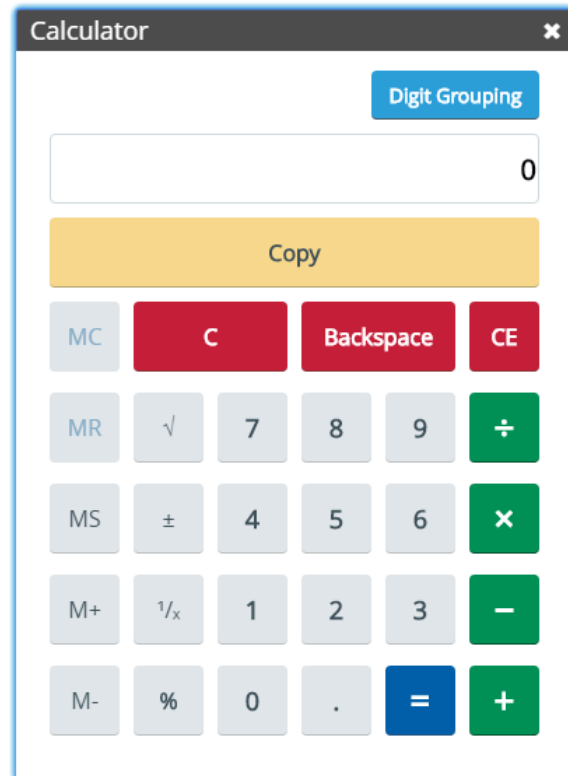
Using the Calculator

Calculator

A calculator is available for your use on every item in the exam. This calculator is similar to the calculator found in Microsoft Windows.

You can use the calculator to perform any of the standard operations for which you would normally use a handheld calculator. The calculator performs basic arithmetic, such as addition, subtraction, multiplication, and division.

Click the 'Next' button to continue.



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Highlighting Text

During the examination, you will be able to highlight question text that you feel is important to refer back to as you progress through the exam. The highlight will remain present as you navigate through the exam, unless you select to remove it.

To highlight text, click and drag the mouse cursor over the desired text. Click the **Highlight** button, as shown in the image below, that appears after releasing the mouse button. To remove the highlight, click on any area of the highlighted text.

How would you characterize the young Frederick Douglass?



The highlight feature cannot be applied to text within the answer options.

Click the 'Next' button to continue.

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Striking Out Options

During the examination, a Strikeout feature is available to help you visually eliminate possible options from consideration. A struck out option will remain present as you progress through the exam, unless you select to remove it.

Right-click on an option to strike it out. Right-click again to remove the strikeout. Left-click on a struck out option to select it as your response. You may strike out as many or as few items as you like.

Practice using the Strikeout feature below. Once you have finished practicing, click the 'Next' button to continue.

How many lungs does the typical human body have?

- A
- B
- C
- D



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Section Review



During the examination, you can review the status of all questions in a current exam section using the grid icon located in the bottom left corner of the exam screen.

To navigate directly to a question, click the corresponding numbered icon. You may also filter your view by unattempted, attempted, and flagged questions. The Section Review can be locked in place using the padlock icon and closed using the "X" icon.

Section Review

Filter by:

Unattempted

Attempted

Flagged

Clear

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

Click the 'Next' button to continue.





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During the examination, you will have the opportunity to give feedback to each question presented to you.

To comment on a question, click the **Comment** button displayed at the bottom of the exam screen. Then proceed to type the comment in the pop-up window, or remove the comment if necessary.

Leave a comment ✕

0/300

Remove comment Cancel Save

Please make sure your comment is relevant to the question you are viewing. Comments intended to challenge questions should provide the problematic details. At the end of the examination there will be a general comments box to capture the overall testing experience.

Please note that providing feedback is optional. The examination timer will continue to run while comments are being entered.

Click the 'Next' button to continue.



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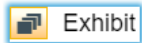
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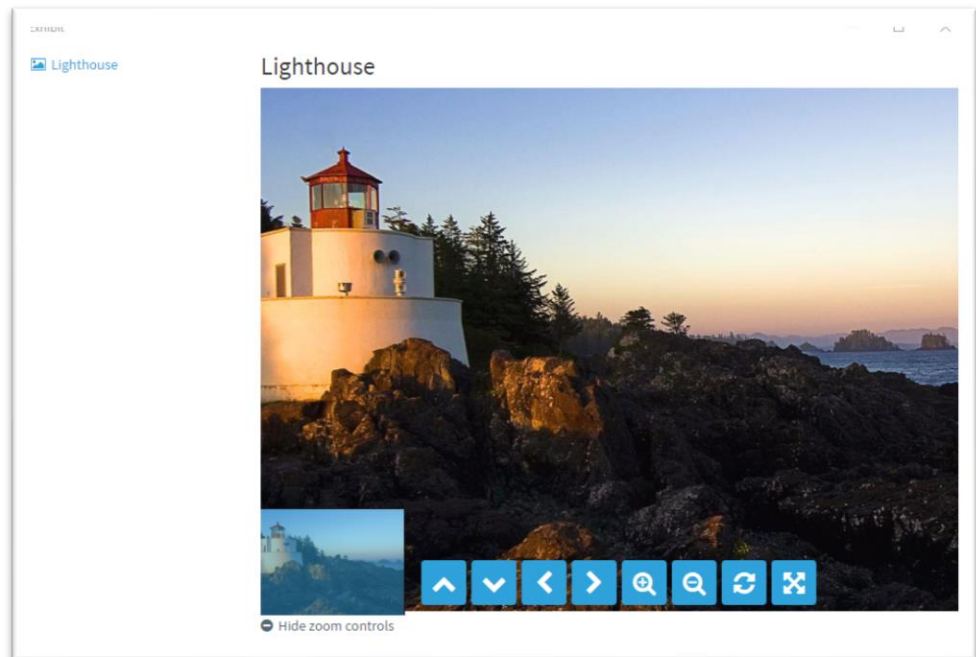
Viewing an Exhibit



An exhibit will be associated with some questions. To view the exhibit, click on the "Exhibit" button as shown above, which will be available between the question and answer options. The image will open in a new window with interactive features such as zoom and pan capabilities. **Please note that zoom is only available with high resolution images, so this feature may not be functional on every exhibit.**

To close the exhibit window, click the "X" in the upper-right corner.

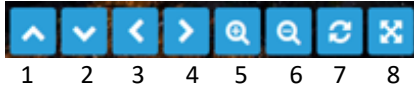
Click the 'Next' button to continue.



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Items 1-4, the arrows are used to pan within a zoomed image.

Items 5 & 6, Use the +/- magnifying glass to zoom in or out.

Item 7, Use the refresh (circular arrows) button to return the image back to its original zoom.

Item 8, Use the four-way arrow button to return the image back to its original zoom.

The exhibit window can be moved and adjusted (minimized, maximized, resized) much like you would any other window on a computer screen.



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Using the PDF Viewer

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Refer to the image below to assist you in understanding the PDF functionality.

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Open the PDF Viewer within the exam

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Within the appropriate item, click on the relevant source material to open the PDF Viewer.

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If more than one PDF exists for your exam, select the "library button"  in the upper right-hand corner to display.

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Navigating through the PDF Viewer



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You can use the mouse to navigate through the PDF document. To view thumbnails of each PDF page, click on the "Thumbnail" button  and select a page to view. If your PDF has bookmarks, click on the bookmark icon to view.

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Other Functions of the PDF Viewer

- Pan  - Click and drag to pan around the document.
- Zoom In/Out  - Click to zoom in and out of the document. Other predefined options available in the drop-down list are: Automatic Zoom, Actual Size, Fit Page, and Full Width.
- Highlight - To highlight text, click and drag the mouse cursor over the desired text. Click the Highlight button that appears after releasing the mouse button. To remove the highlight, click on any area of the highlighted text.

Click the 'Next' button to continue.



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* On the image on the next page, the bookmark icon is circled in red.

* To remove the PDF dropdown menu from view, click on the library button a second time.



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 - 1.3 Recognized Technical Concepts
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- 3 Terms, Definitions, Acronyms, and Abbreviations
 - 3.1 Terms and Definitions
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- 4 Owner/User Inspections Organization
 - 4.1 Owner/User Organization Responsibilities
 - 4.2 Engineer
 - 4.3 Repair Organization
 - 4.4 Inspector
 - 4.5 Examiners
 - 4.6 Other Personnel
 - 4.7 Inspection Organization Audits
- 5 Inspection, Examination, and Pressure Testing Practices
 - 5.1 Inspection Plans
 - 5.2 Risk-Based Inspection (RBI)
 - 5.3 Preparation for Inspection
 - 5.4 Inspection for Different Types of Damage Mechanisms and Failure Modes
 - 5.5 Types of Inspection and Surveillance for Pressure Vessels
 - 5.6 Condition Monitoring Locations (CMLs)
 - 5.7 Condition Monitoring Methods

Pressure Vessel Inspection In-service Inspection, and Alteration

API 510
TENTH EDITION, MAY 2014
ADDENDUM, MAY 2017



Reference

- API 510(5)
- API 571 (510)(5)
- API 572(5)
- API 576(5)
- API 577(5)
- ASME Section V (510)(5)
- ASME Section VIII(5)
- ASME Section IX(5)

Special Notes

API publications necessarily address problems of a general nature. With respect to particular circumstances, local, state, and federal laws and regulations should be reviewed.

Neither API nor any of API's employees, subcontractors, consultants, committees, or other assignees make any warranty or representation, either express or implied, with respect to the accuracy, completeness, or usefulness of the



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Drag and Drop:

Applicants will be presented with a list of options and must select all that answer the question by placing them in the provided answer box.

The applicant may remove a selection from the box by clicking and holding the option and dragging it out of the box.

Applicants will answer the question correctly only if they place all correct options in the provided box. If any option placed in the box is incorrect, the question is wrong. No partial credit is given.

Ordered Response:

Applicants will be asked to identify the correct order of a process. Several options will be listed under the question and applicants must arrange them, by clicking and dragging, in the correct step order in the boxes provided below the question. All options will be used in the answer and no options will be used twice.

To answer the question correctly, an applicant must place all options in the right order. If any option is out of order, then the question is incorrect. No partial credit is given.



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Using the Drag and Drop Items

For a Drag and Drop item, you must click on the source panel text and drag it to the desired destination panel.

You may choose to change your answer(s). To remove a source panel from a destination panel, you must click on the desired source panel text and drag it out of the destination panel. You may re-do the entire task if you are not satisfied with your selections by moving all source panels off of the destination panels so they return to their original positions.

Note: Depending on the specific item a single source panel may be placed in multiple destination panels.

You can practice with the sample below, when you are finished click the "Next" button to continue.

Options

December Horse June Dog

Months of the year

Animals

[Empty destination box for Months of the year]

[Empty destination box for Animals]



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Using the Drag and Drop Items

For a Drag and Drop item, you must click on the source panel text and drag it to the desired destination panel.

You may choose to change your answer(s). To remove a source panel from a destination panel, you must click on the desired source panel text and drag it out of the destination panel. You may re-do the entire task if you are not satisfied with your selections by moving all source panels off of the destination panels so they return to their original positions.

Note: Depending on the specific item a single source panel may be placed in multiple destination panels.

You can practice with the sample below, when you are finished click the "Next" button to continue.

Options

Months of the year

Animals

June

Dog

December

Horse

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Extended Matching

Applicants will be presented with two columns and be asked to match options on the left with options on the right. To match the options, click on option box on the left or the right and then click on the corresponding answer in the opposite column. When a match is made a black line will appear between the matches.

If you wish to un-match two boxes, place the cursor over the line, which will turn red, and a scissor symbol will appear. Click the symbol to remove the line.

Extended matching questions will be correct if the options in the left and right columns are correctly matched. No partial credit will be given.

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Section: Introduction

Introduction Time Rem...
00:08:31

0/170
Items Attempted

Finish Test

Test: 510 - Pressure Vessel Inspector Certification

Candidate: DELVECCHIO Kathy

Answering Extended Matching Items

To complete a select from a list question, select a the first answer box, then click on its corresponding answer box in the row facing. This will connect the boxes with a red line.

Repeat this procedure for all the answer boxes. Multiple lines can be drawn to individual boxes.

If you wish to remove a connecting line that was drawn in error, simply use the mouse to click on the red line. It will disappear and allow you to redraw connections for the boxes it had connected previously.

Use the example below to become familiar with the functionality.

Dog	Feline
Cat	Canine
Cow	Bovine

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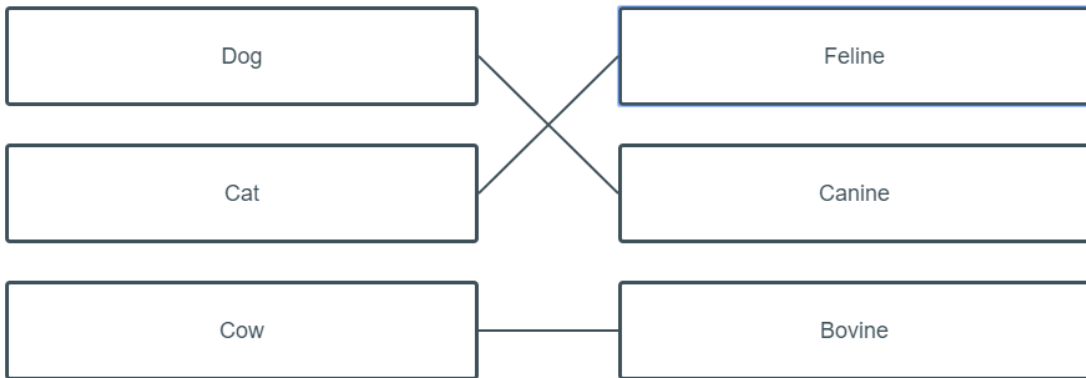
Answering Extended Matching Items

To complete a select from a list question, select a the first answer box, then click on its corresponding answer box in the row facing. This will connect the boxes with a red line.

Repeat this procedure for all the answer boxes. Multiple lines can be drawn to individual boxes.

If you wish to remove a connecting line that was drawn in error, simply use the mouse to click on the red line. It will disappear and allow you to redraw connections for the boxes it had connected previously.

Use the example below to become familiar with the functionality.



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Translations

If during the registration process with API, you elected to test with an available translation, it will be available for test questions. The selection of testing with a translation cannot be made or modified on the test day. For candidates who have selected to take a translated exam, the English question and options will be presented above the translation.

Click the 'Next' button to continue.



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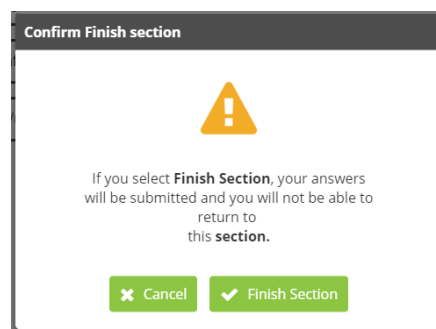
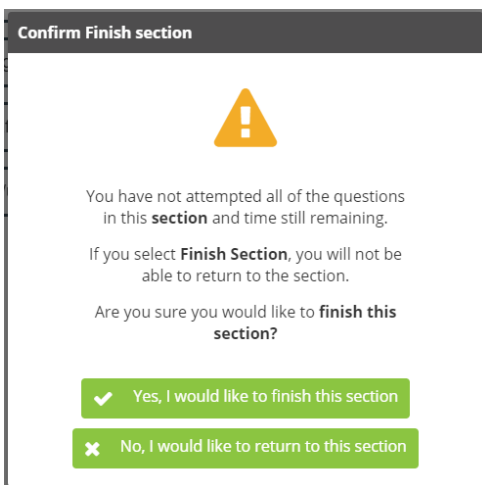
Ending Exam Sections

After completing and reviewing all of the questions within a section, you can navigate to the next section by clicking the **Finish Section** button in the top-right corner of the screen. Once clicked, a pop-up window will appear confirming you want to finish the section. Select "*Yes, I would like to finish this section*" to submit your answers for that section and progress to the next section.

The final section of the test is a short survey. Once you have completed the survey, you can end your session by clicking the **Finish Test** button in the top-right corner of the screen and confirming you would like to finish the test.

Please note that once you leave a section, you may not return. Any questions that are left incomplete will be marked as incorrect.

Click the 'Next' button to continue.



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* For each exam section, closed book and open book, if "Finish Section" is clicked before time is up, warnings will be displayed to ensure that the candidate confirms that they wish to leave the section. Two warnings pop-ups will be issued, and candidates must answer "Yes, I would like to finish this section" and "finish section."



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Tutorial Conclusion

This concludes the tutorial. You can review the tutorial by clicking on the "Back" button to back up one screen at a time, or by using the numbered buttons displayed on the left side of the screen. You may view the tutorial at any point during an active examination by clicking on the question mark icon. This icon can be found in the bottom left of the screen once you have begun testing.

Good luck with the examination.

Click the 'Start the Test' button to exit the tutorial and begin the examination.



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Question Screen:

Question: 49 **Section: 2** Section Time Remaining 03:44:39 0/150 Items Attempted **Finish Section**

Test: 510 - Pressure Vessel Inspector Certification **Candidate: VIERS Amanda**

1 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49

Reference
Exhibit
Calculator

A

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C

D

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