SolidWorks Corporation: DRWT Sample Exam

Certified SolidWorks Professional – Advanced Drawing Tools (CSWPDRWT)

DISCLAIMER: This sample exam is provided to show you the format and approximate difficulty level of the real exam. It is not meant to give away the whole DRWT exam.

How to take this sample exam:

1. To best simulate the conditions of the real test, it is best NOT to print this exam. Since the Virtual Tester client window runs concurrently with SolidWorks you must switch back and forth between the two applications. Keeping this document open and consulting it on your computer while running SolidWorks is the best method to simulate the real test conditions.

2. The multiple choice answers should serve as a check for you to ensure that your model is on the right track while completing this exam. If you do not find your answer in the selections offered then most likely there is something wrong with your drawing at that point.

3. Answers to the questions are on the last page of this sample test document. **No details to the solutions for either this sample exam or the real test will be shared by the SolidWorks Certification team. Please consult your SolidWorks reseller, your local user group, or the on-line SolidWorks forums at forum.solidworks.com to review any topics on the DRWT exam.**

What you will need for the real DRWT exam:

1. A computer that is running SolidWorks 2010 or higher.

2. The computer must have a connection to the Internet.

3. A double-monitor is recommended but not necessary.

4. If you will be running the Virtual Tester client on a separate computer from the one that is running SolidWorks, make sure there is a way to transfer files from one computer to the other. You will be required to download SolidWorks files during the real test to be able to correctly answer some of the questions.

The following topics are covered on the DRWT exam:

Basic View Creation
Section Views
Auxiliary Views
Alternate Position Views
Relative to Model Views
Broken-out Section
View Focus when creating 2D geometry
Transferring sketch elements to/from Views
BOM Table creation and modification:

- Top level
- Parts-only
- Indented
- Part configuration grouping
- Missing items
- Accessing custom properties in BOM
- Using equations with BOM data

Item numbers and their display
Hide/show components
Linked notes
Importing Model Items

NOTE: The DRWT exam is a test of one's knowledge of SolidWorks Drawing functionality and tools. This is not a test on creating dimensioned drawings that adhere to any specific standard such as ANSI or ISO standards. Due to the nature and limitations of the Tangix on-line testing environment, there are no questions on actual dimensioning processes.

Total Questions: 20
Total Points: 200

150 out of 200 points needed to pass the DRWT.

SAMPLE TEST

1. View Functionality: View Creation 1
(Save drawing after each question in a different file in case it must be reviewed)

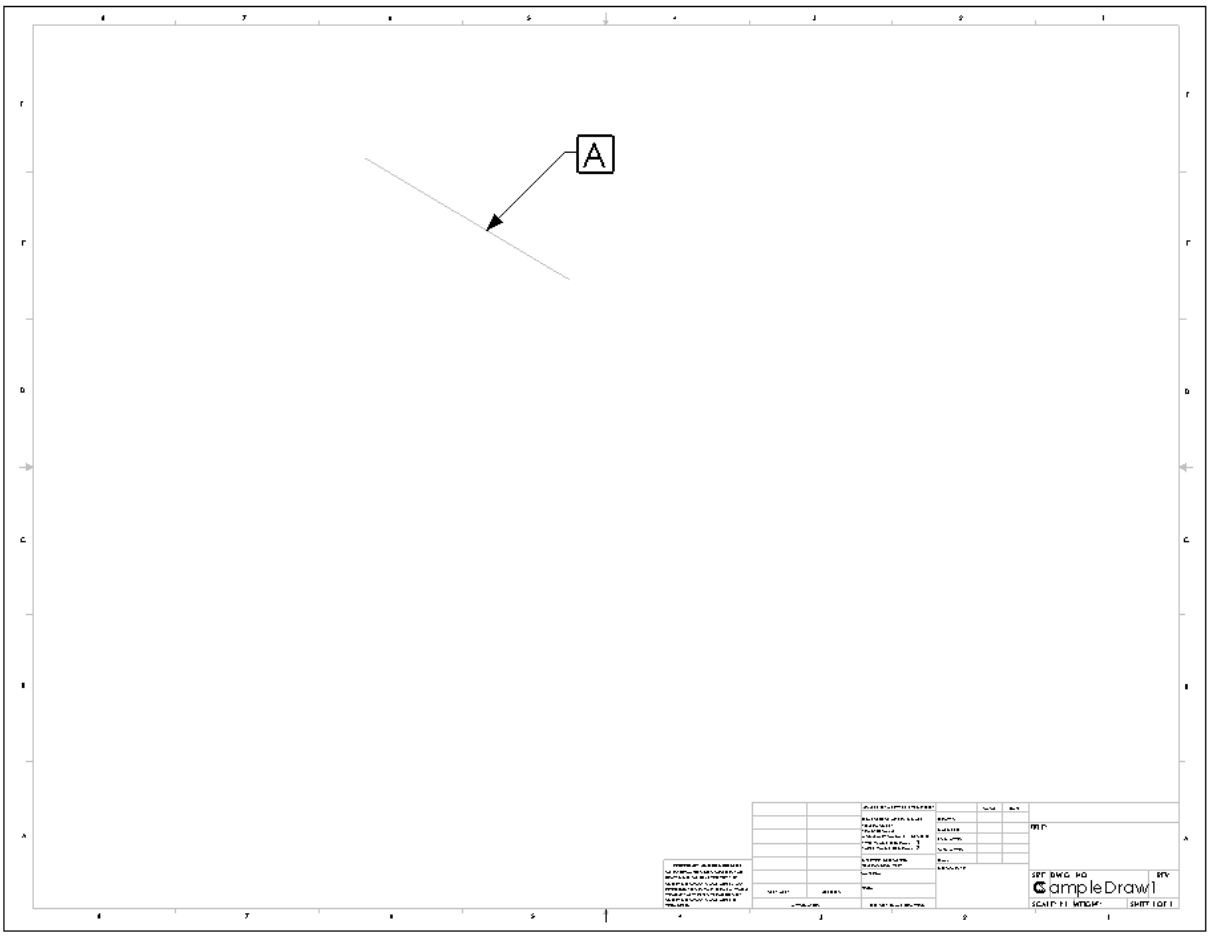
Unit system: Defined - MMGS (millimeter, gram, second)
Decimal places: 2
Dimension Type: True

- Open "SampleDraw1.slddrw". This drawing contains one sketch line labeled "A".

Note: Do not modify the angle of Line A in any way. Doing so will compromise the answer for this question.

- Insert a "Front View" of the part "Widget" in the orientation shown. Edge "1" of Assy1 should be horizontal with respect to the drawing. (Scale 1:1)

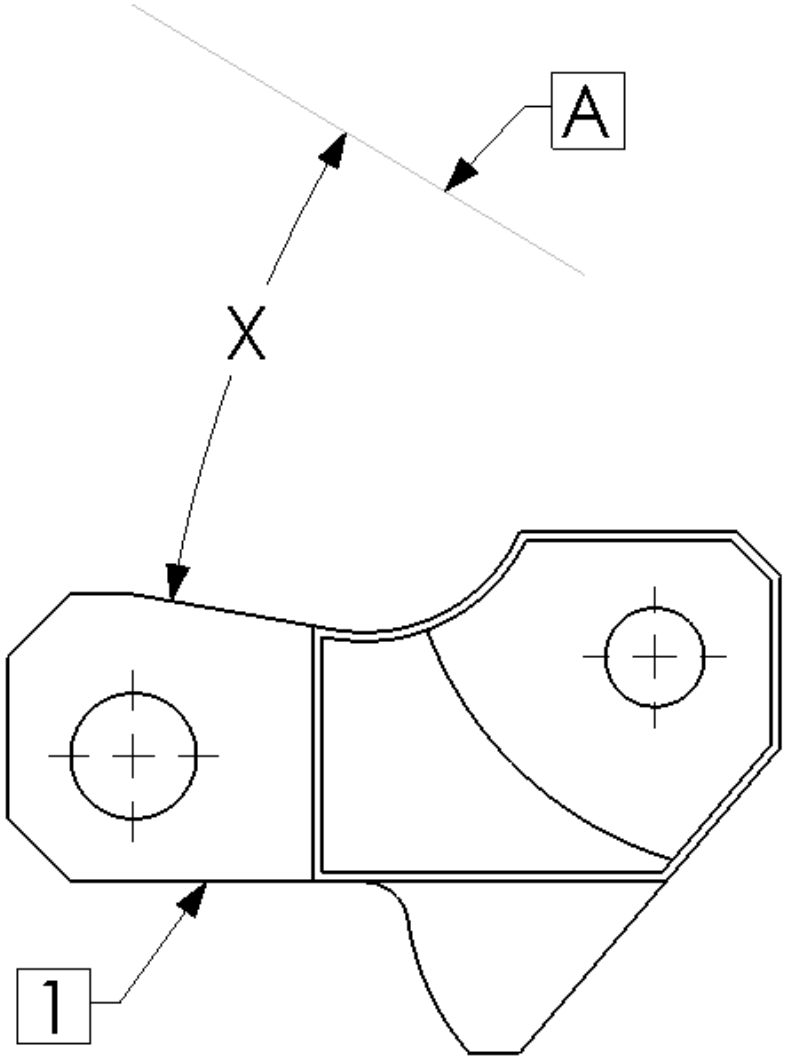
- Create the dimension X as shown in the second image between the edge of the crank handle and line A.



Hint: You may need to cut or copy and paste the line A to be able to create the dimension X.

What is the value of X (degrees)?

a) 23.74 degrees
b) 20.85 degrees
c) 18.79 degrees
d) 25.12 degrees



2. View Functionality: View Creation 2
(Save drawing after each question in a different file in case it must be reviewed)

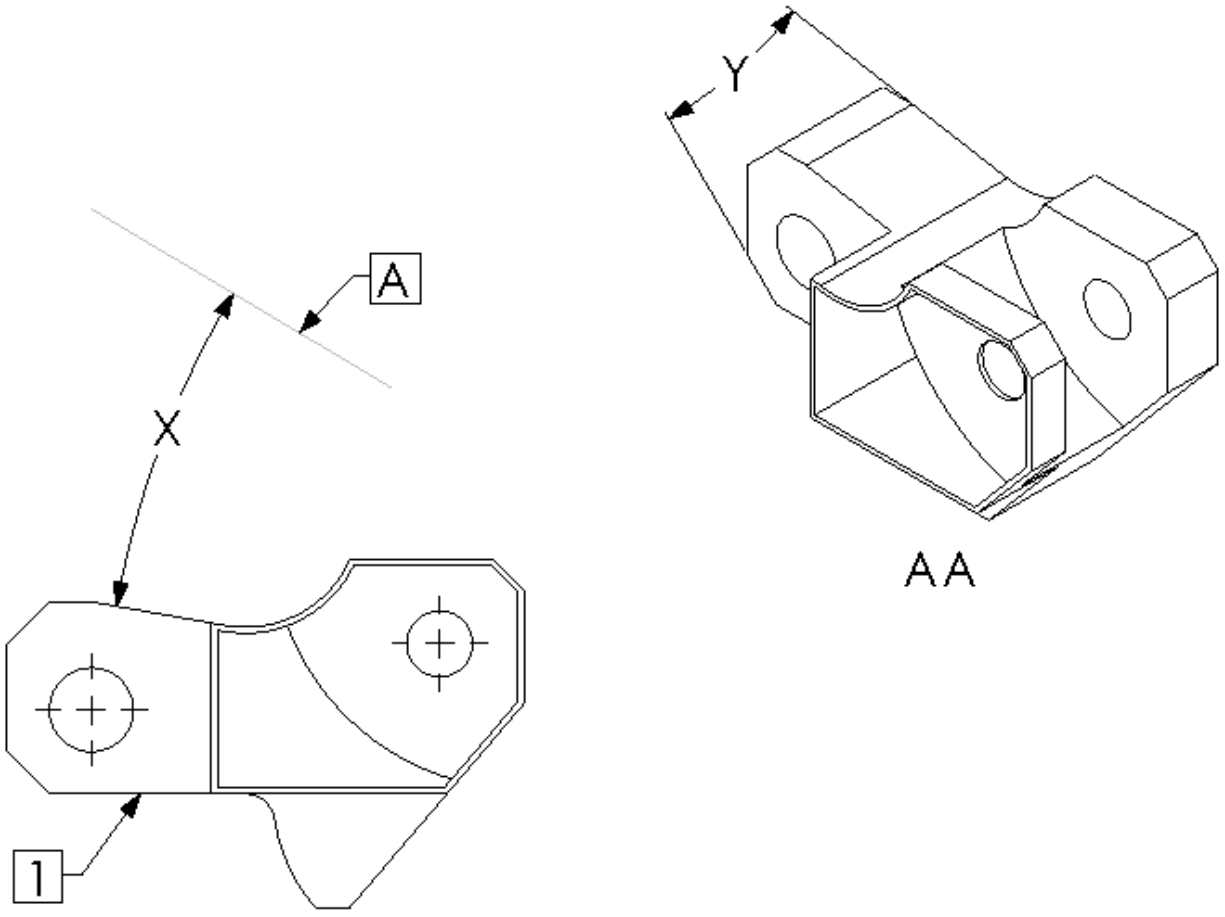
Unit system: MMGS (millimeter, gram, second)
Decimal places: 2
Dimension Type: Projected

- Use the drawing and Front view as created from Question 1.

- Create the view AA projected from the created Front view.

- Create the angled dimension Y as shown in the image.

What is the value of Y (degrees)?



3. Basic View Functionality: View Creation 3
(Save drawing after each question in a different file in case it must be reviewed)

Unit system: MMGS (millimeter, gram, second)
Decimal places: 2
Dimension Type: Projected

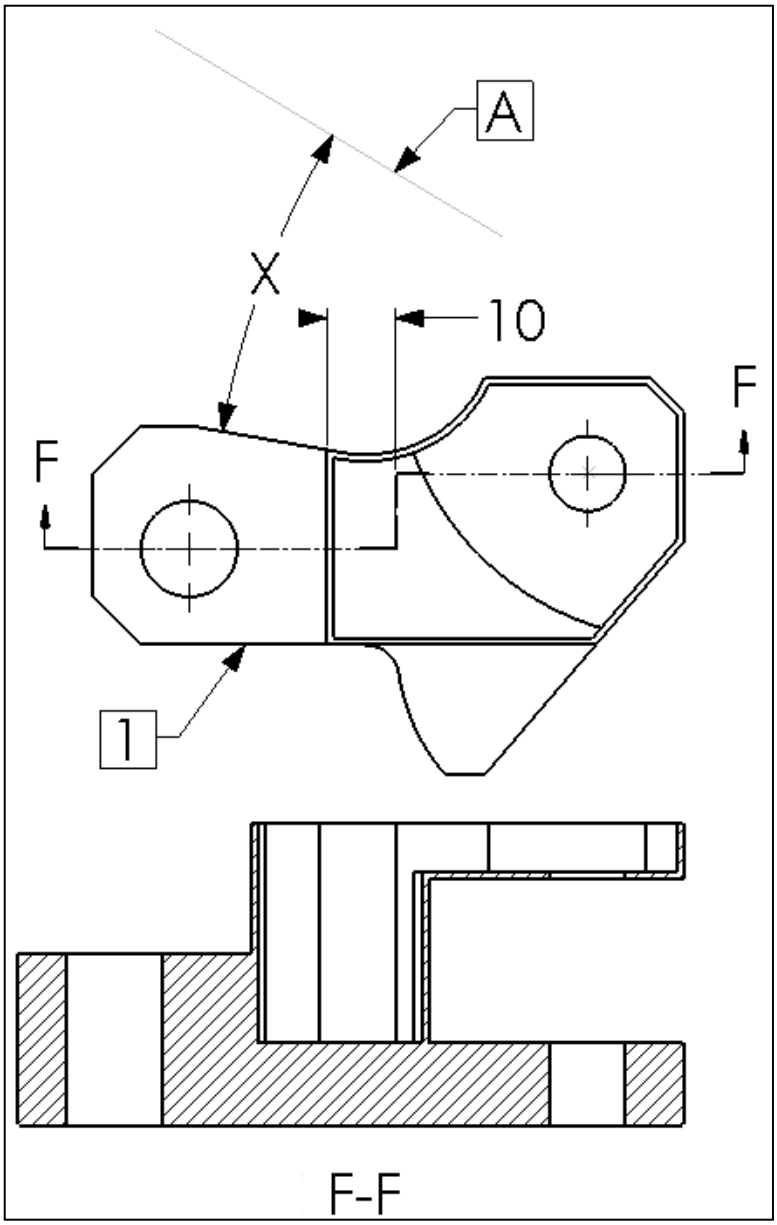
- Using the Front View created in Question 1, create the View F-F as shown in the image.

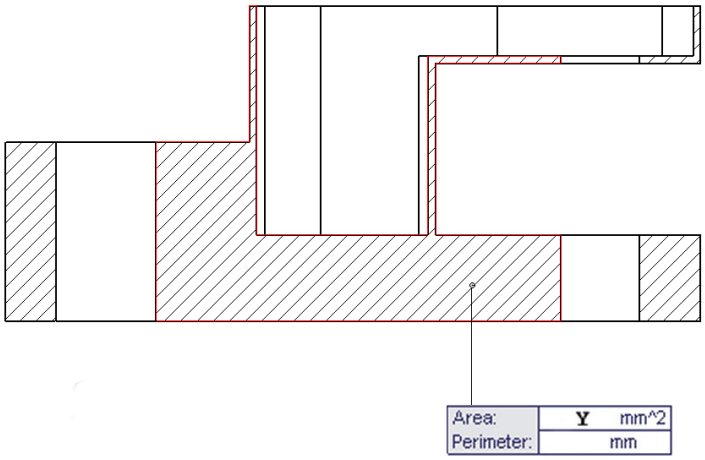
Note: Use the included dimensions in the image to aid in the creation of View F-F

- In View F-F, measure the Perimeter of the cross-section area indicated in the second image.

What is the measured Area Y of the cross-section area selected in the second image below (mm^2)?

Note: Depending on the version of SolidWorks you are using you may have to CTRL Select to select the entire area indicated.





4. BOM Functionality: BOM Creation
(Save drawing after each question in a different file in case it must be reviewed)

Unit system: N/A
Decimal places: N/A
Dimension Type: N/A

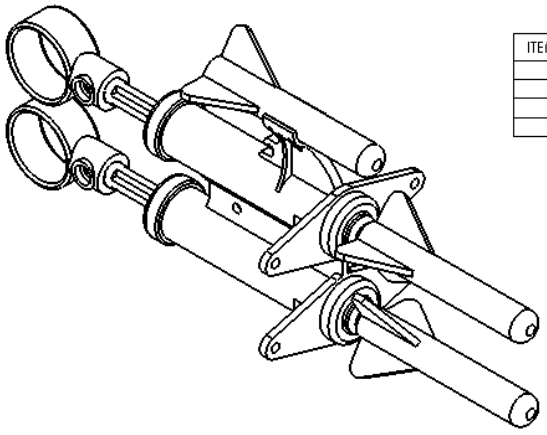
Note: All images for this problem set are for reference only. The BOM Table you generate may differ in content from the one shown.

- Open “SampleDraw2.slddrw”.

- Insert the “Isometric” view of the Default configuration of assembly “Launcher.SLDASM” using Scale 1:1.

- Create a new Bill of Material Table with the following options:

- BOM Type: Top-level only
- Configurations: Default
- Part Configuration Grouping: Display as one item number, Display all configurations of the same part as one item
- Item Numbers: Start at 1, Increment of 1
- Allow item numbers to change when reordering rows
- First column should be "Item No"
- Second column should show the Custom Property “PartNo”
- Third column should show the Custom Property “Description”
- Fourth column should show the "Quantity"



ITEM NO.	PartNo	DESCRIPTION	QTY.
1	73452	Sub Trigger Assy	6
2	78945	Foam Arrow	2
3	98986688	Foam Nozzle	1
4	113221	Launcher Main Body	1

- Find the Quantity of “Sub Trigger Assy", Part Number 2222-32421 in the assembly and select it from the choices given:

a) Qty: 2
b) Qty: 3
c) Qty: 1
d) Qty: 5

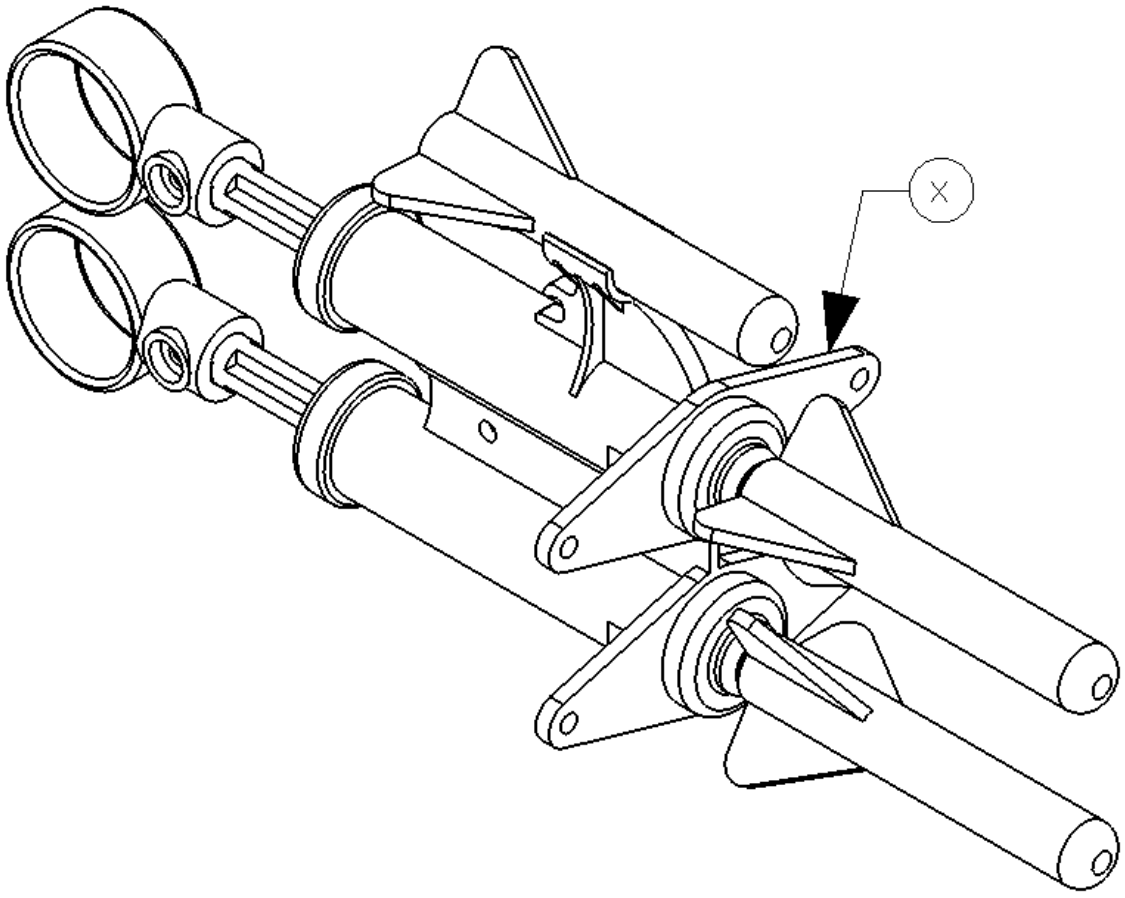
5. BOM Functionality: Reordering BOM Items 1
(Save drawing after each question in a different file in case it must be reviewed)

Unit system: N/A
Decimal places: N/A
Dimension Type: N/A

- Using the BOM created in the previous question, modify the BOM so that it is sorted by Part Number in an ascending order.

Note: For example, part numbers that start with 1 are at the top of the BOM.

- Find the Item Number that corresponds to the assembly component identified by "X" in the image.



What is Item Number of the component identified by “X”?

6. BOM Functionality: BOM Table - Total Cost
(Save drawing after each question in a different file in case it must be reviewed)

Unit system: N/A
Decimal places: N/A
Dimension Type: N/A

Note: All images for this problem set are for reference only. The BOM Table you generate may differ in content from the one shown.

- Add one column named 'Total Cost' with the following requirement:

•The 'Total Cost' column will be the 'Cost' multiplied by the Quantity of the corresponding component.

- Sum the "Total Cost" of all the components.

What is the value of the sum of the "Total Cost" of all the components shown in the BOM?

ITEM NO.	PartNo	DESCRIPTION	QTY.	Total Cost
1	112234214112	Housing	1	10.25
2	2222-32421	Sub Trigger Assy	2	4.59
3	7345643534	Ring	3	3.75
4	98734563345	Nipple	2	5.12
5			Total Cost	23.71

Answers:

1. b) 20.85 degrees
2. 22.01 degrees
3. 924.12 mm^2
4. a) Qty: 2
5. Item 4
6. 33.64

For a description and walk-through of the VirtualTester testing client, please go to these links:

- Starting the exam: http://www.virtualtester.com/index.php/support/starting_the_exam/
- During the exam: http://www.virtualtester.com/index.php/support/during_the_exam/
- Ending the exam: http://www.virtualtester.com/index.php/support/ending_the_exam/