

SOLIDWORKS Certification Exam Guide & Practice Test



**CSWPA-DT: Certified
SOLIDWORKS Professional
Advanced Drawing Tools**

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About This Guide

This guide contains information, advice, and practice for obtaining your advanced professional certification in SOLIDWORKS Drawing Tools. Here, you will find:

- An overview of SOLIDWORKS Certifications
- Details about the CSWPA-DT Exam
- Advice on preparing for and taking the CSWPA-DT Exam
- A Practice CSWPA-DT Exam and answer key
- Directions to useful SOLIDWORKS websites

The CSWPA-DT Certification

SOLIDWORKS Certifications are a benchmark to measure your knowledge and competency with SOLIDWORKS software. A certification helps you stand out from the crowd and showcases your expertise to businesses and professionals alike—a valuable asset in a competitive job market.

A few popular SOLIDWORKS Certifications include:

- CSWA: Certified SOLIDWORKS Associate
- CSWP: Certified SOLIDWORKS Professional
- CSWPA: Certified SOLIDWORKS Professional Advanced:
 - Sheet Metal
 - Weldments
 - Surfacing
 - Mold Tools
 - Drawing Tools
- CSWE: Certified SOLIDWORKS Expert
- CEPA: Certified Enterprise PDM Administrator

Why take the CSWPA-DT Exam?

The Drawing Tools certification sets you apart as a person who has successfully demonstrated their understanding of the tools and functionality found in the SOLIDWORKS Drawing environment. For hiring managers, it acts as a valuable assessment to attest for an individual's competency, thereby reducing the amount of time and energy required to research prospective candidates.

Passing four of the five CSWPA exams, along with the CSWP, is a prerequisite for taking the CSWE Exam to become a Certified SOLIDWORKS Expert.

All candidates receive electronic certificates, business card logos, and personal listing in the CSWP directory when they pass.

CSWPA-DT Exam Details

The CSWPA-DT covers the following topics:

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 CSWPA-DT 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

Points Needed to Pass: 150

Maximum Time: 100 min

How to Prepare for the Exam

Don't let the exam questions take you by surprise! We recommend that you practice the skills in the "CSWPA-DT Exam Details" section above, and that you ask for help from experienced SOLIDWORKS users.

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 CSWPA-DT exam.

A great resource is the SOLIDWORKS website (SOLIDWORKS.com).

- For training courses, go to **Home > Support > Training > SOLIDWORKS Courses**.
- To download models to practice on, go to **Home > Support > Training > SOLIDWORKS Training Files**
- You'll find a wealth of access to videos, tutorials, blogs, events, and fellow users in the SOLIDWORKS Community at **Home > Resource Center**

You can also log into my.solidworks.com to browse lessons, forums, models, and much more.

Last but not least, make use of this exam guide to review realistic exam questions, look over important topics, and familiarize yourself with the exam procedure.

How to Take This Practice Exam

1. You must be running SOLIDWORKS on the computer, both for the practice and actual test. SOLIDWORKS can only be installed with the Windows operating system.
2. Excel should be installed on the computer you are running SOLIDWORKS to ensure that your Design Table functionality works properly for the exam.
3. To simulate real conditions, it is best NOT to print this exam.
In the real test, the VirtualTester client window runs concurrently with SOLIDWORKS, requiring you to switch between applications. Keep this document open and consult it while running SOLIDWORKS.
4. After each question, save a version of your model in a different file for later reference. This may also help you fix errors later on in the test.
5. The multiple choice will help you check that your model is on the right track. If your answer is not listed in the selections offered, it is likely that there is something wrong with your model.
6. This guide includes an answer key after the practice exam.

Taking the Real Exam

The real exam can be taken on your personal computer at a time of your choosing. The CSWPA-DT Exam is administered through the Tangix TesterPRO Client, an application that you may download from the SOLIDWORKS VirtualTester website. You will need a connection to the Internet throughout the exam.

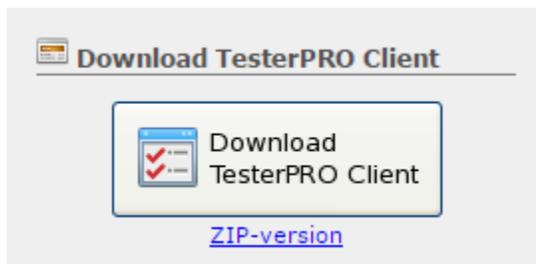
If you will be running the client on a separate computer from the one that is running SOLIDWORKS, make sure there is a way to transfer files from one computer to the other. You will be required to download SOLIDWORKS files during the real test to be able to correctly answer some of the questions.

To learn the testing procedure in VirtualTester, if you have a MySOLIDWORKS account, please refer to this video:

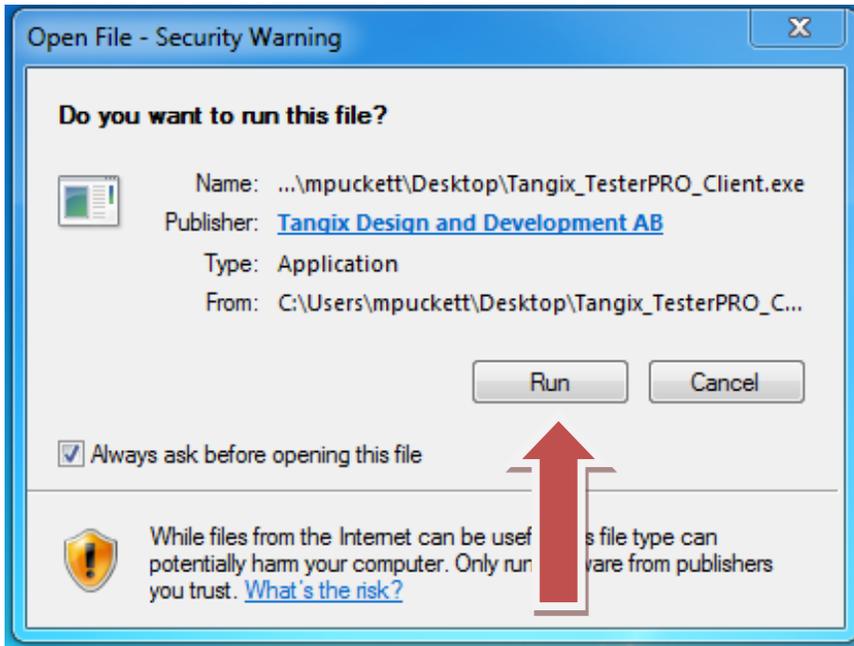
<http://my.SOLIDWORKS.com/mylearning/lessons/489/installing-and-viewing-the-test-software>

Alternatively, you may follow these steps:

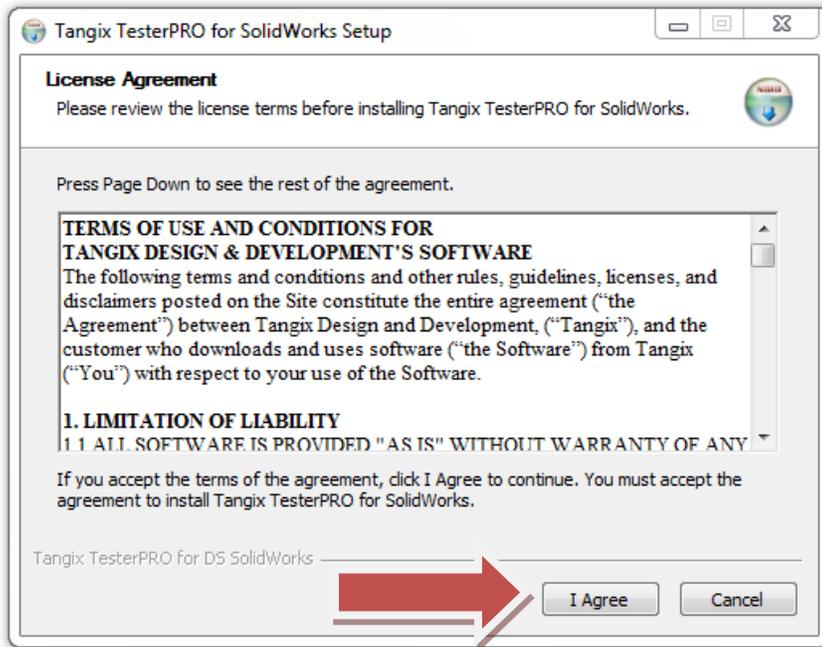
1. Visit the SOLIDWORKS VirtualTester Certification Center at <https://SOLIDWORKS.virtualtester.com/>.
2. Locate and click the button (right hand side of page) to download the Tangix TesterPRO Client:



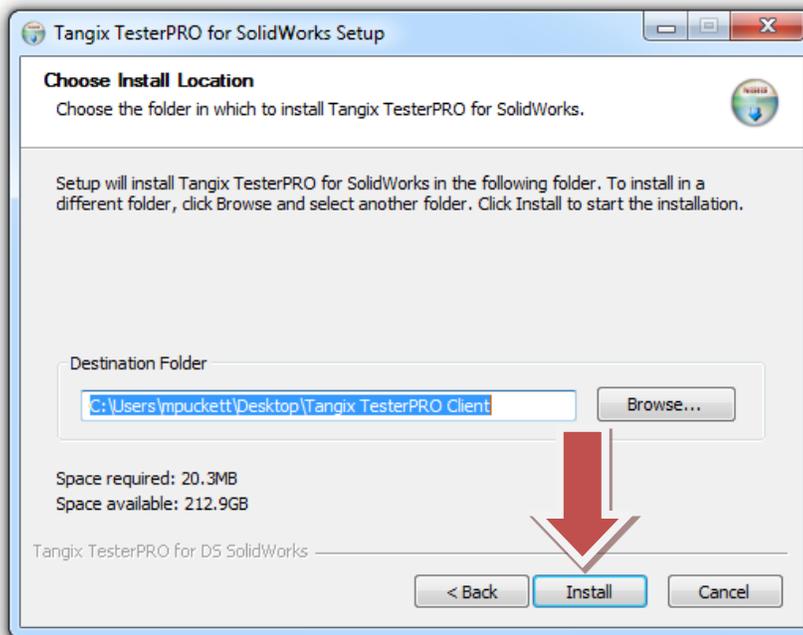
3. Open the downloaded folder and run the executable file:



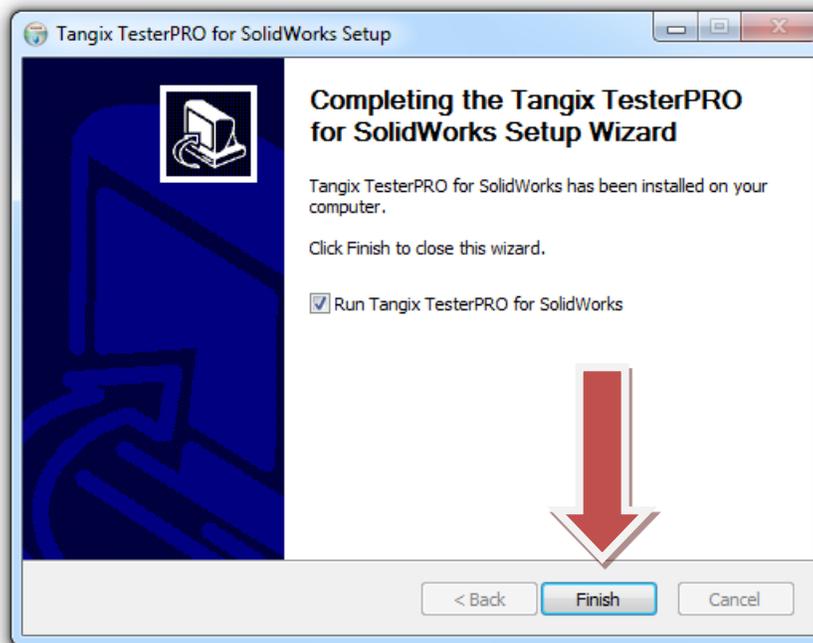
4. Agree to the License Agreement.



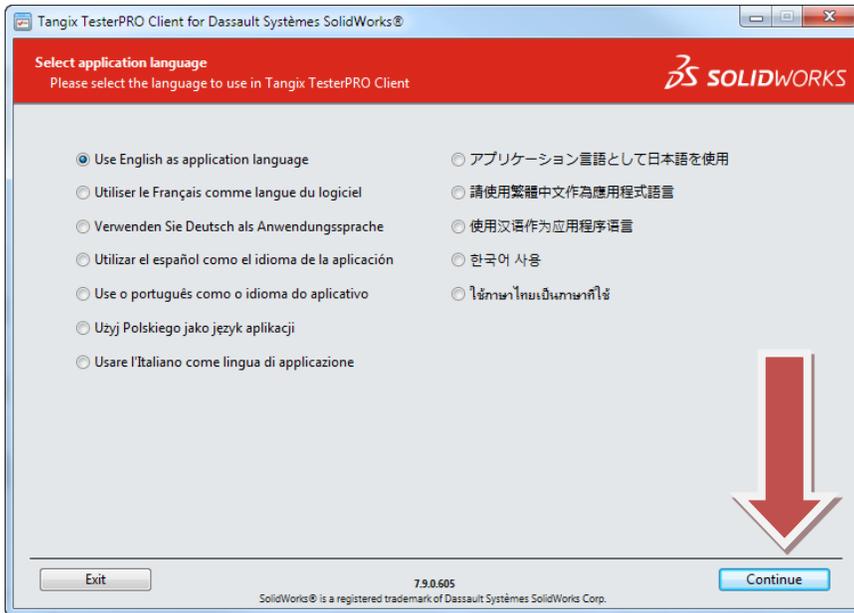
5. Click the install button.



6. Click the finish button.

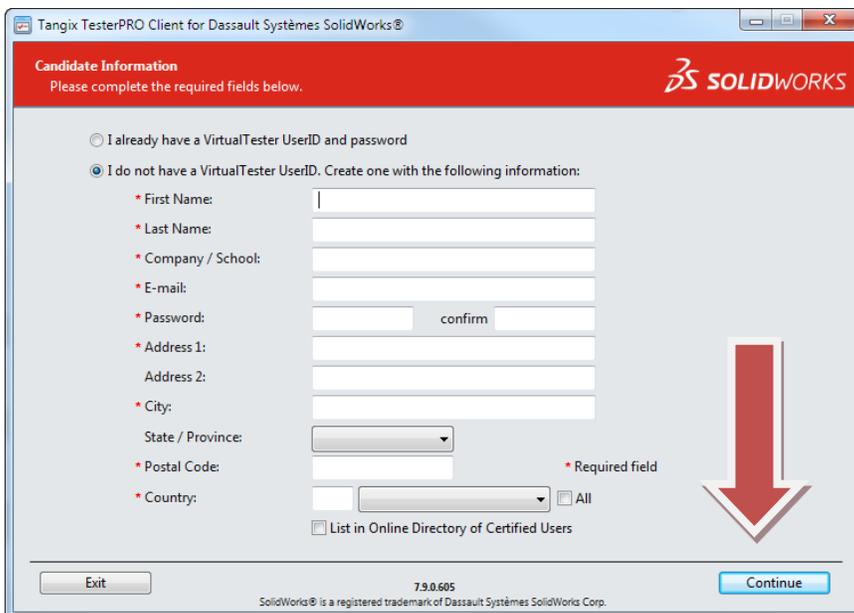


7. When you run the program, select your language and click Continue.



If you have already taken a SOLIDWORKS Certification Exam, skip to step 9.

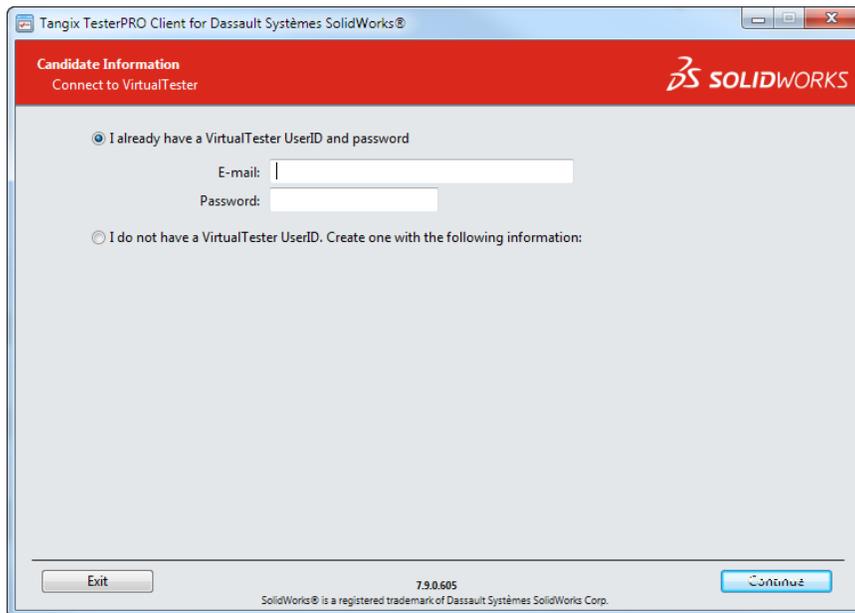
8. If this is your first exam, you will need to create an account. Fill in the required fields and click continue:



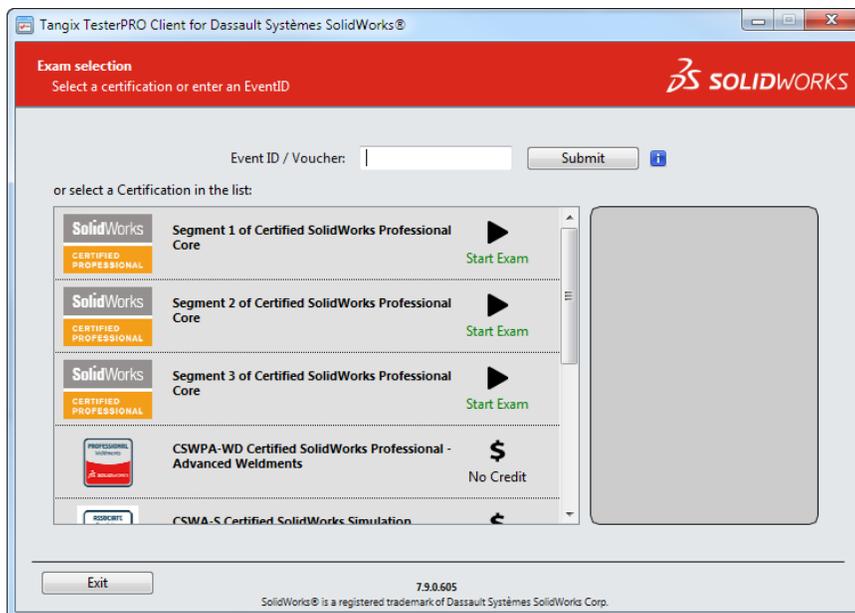
Write down your login credentials for future use!

Skip to step 10.

9. If you have already taken a SOLIDWORKS Certification Exam, select the option below, fill in your credentials, and click continue.



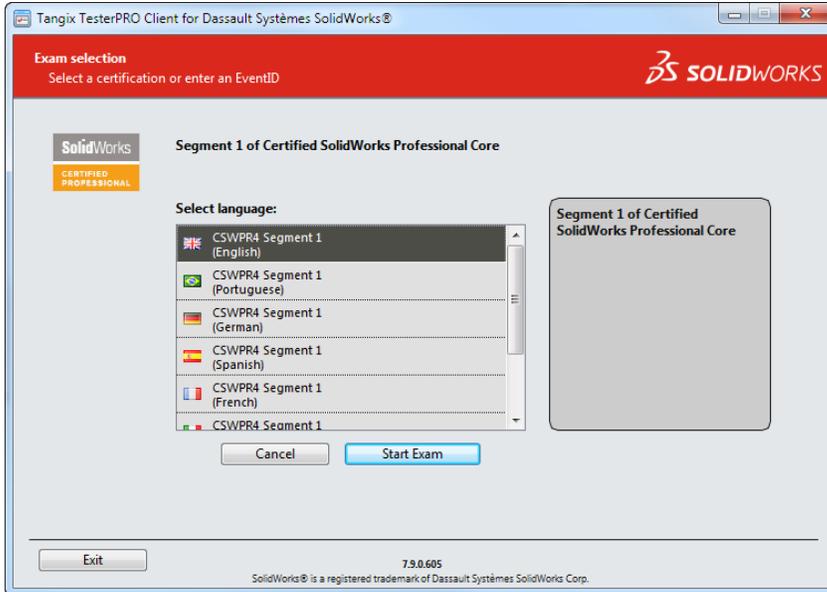
10. On the exam selection page select an exam that has the words 'Start Exam' next to it (only exams that you have credits for will show as available):



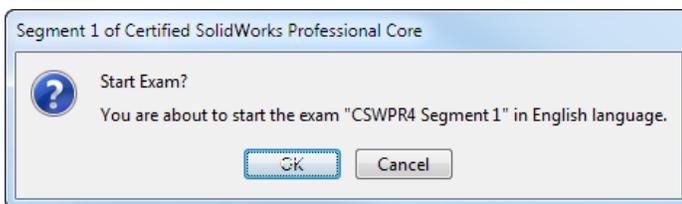
If you do not have credit for the exam, do one of the following:

- If you have an Event ID or Voucher, type it into the field on this page and click "Submit."
- Purchase an exam credit online. This may be found on SOLIDWORKS.com: Click Support > Certification > Exam Registration.

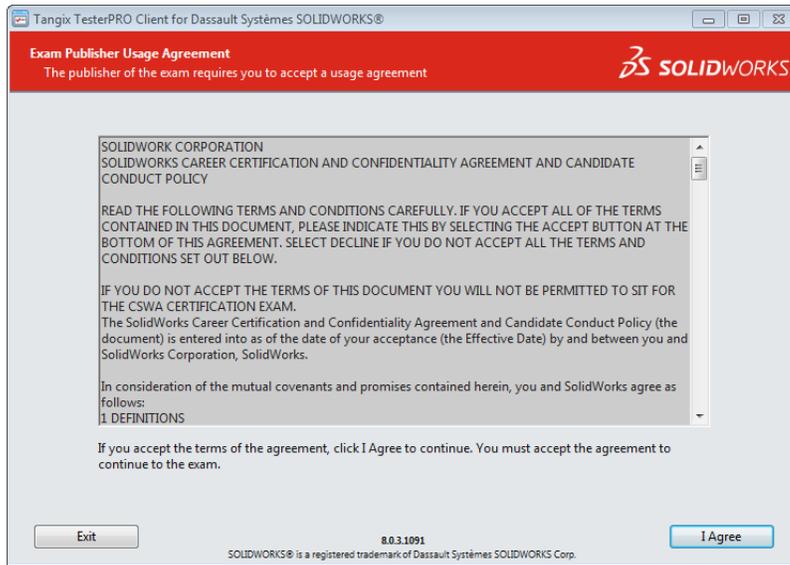
11. You may be asked to select a language. Select a language and click "Start Exam."



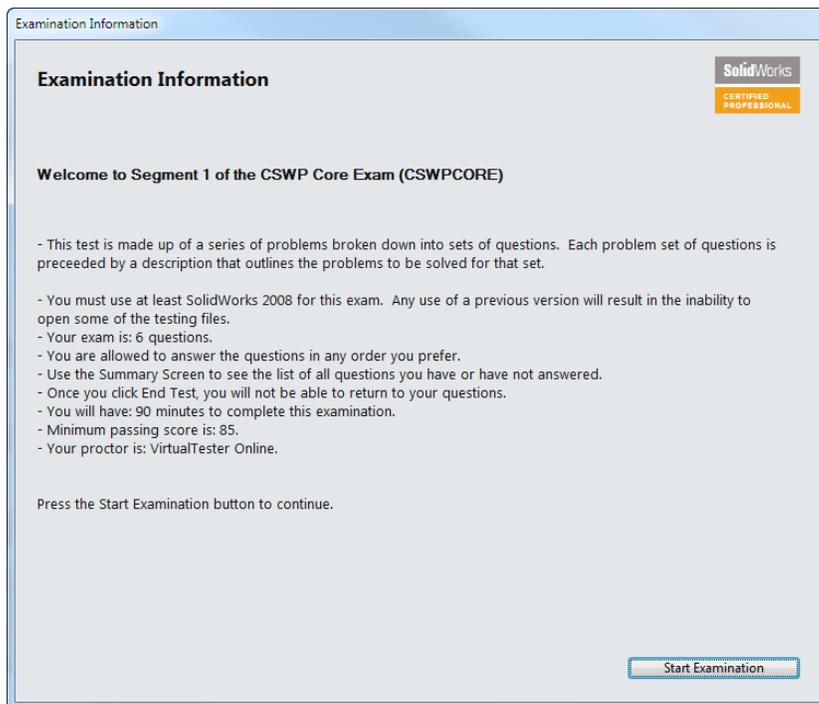
12. Confirm the exam you are about to begin:



13. Agree to the Confidentiality Agreement and Candidate Conduct Policy.



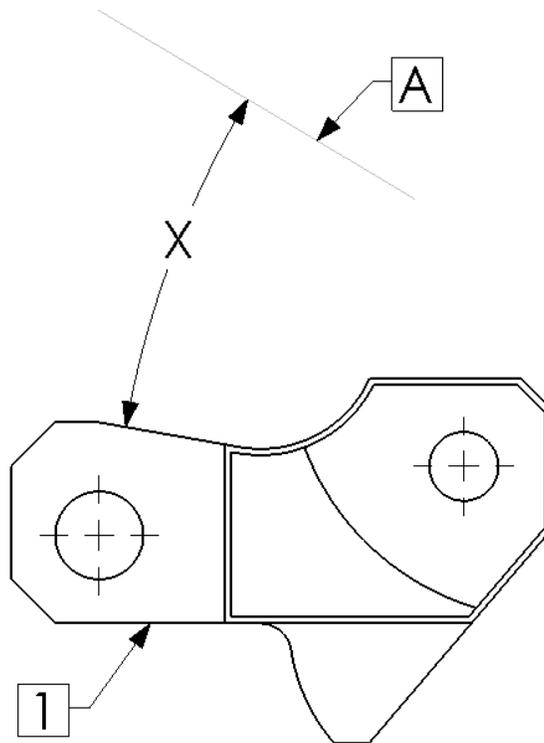
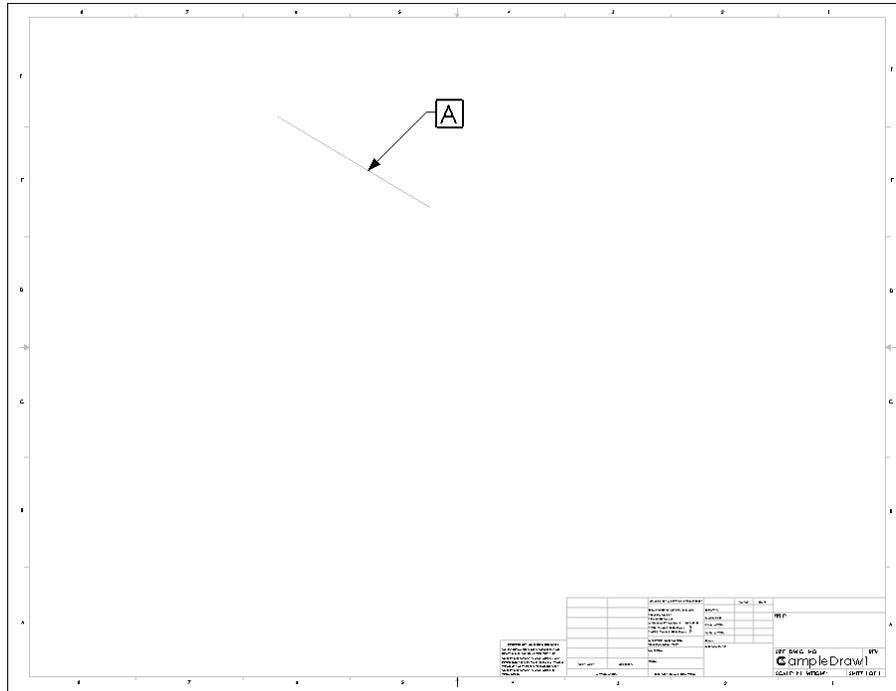
14. On the Examination Information page, read the information and then click "Start Examination", this will begin the timed portion of your exam.



The practice exam begins on the next page.

Test Questions

The following images are to be used to answer Question 1.



1. View Functionality: View Creation 1

REMINDER: 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)

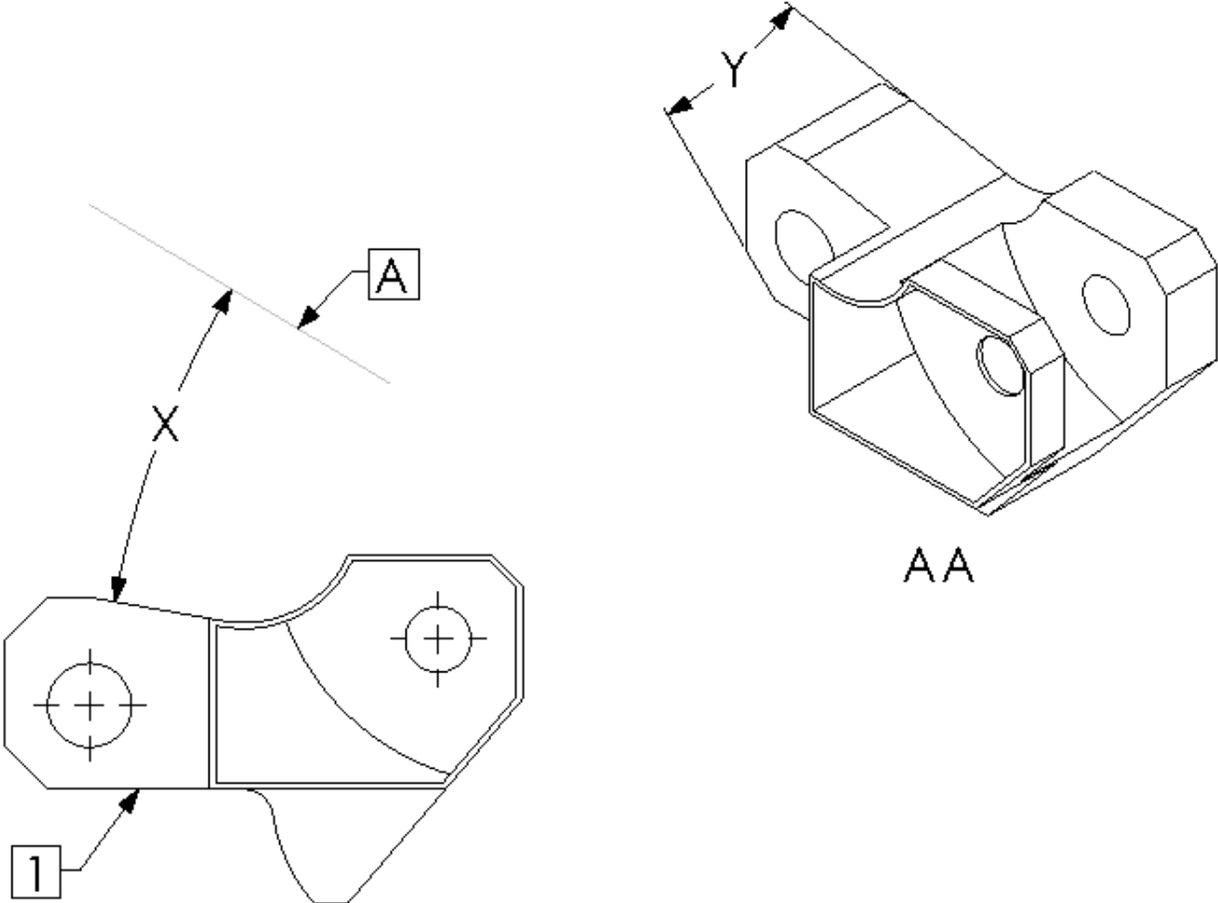
Create the dimension X as shown in the second image between the edge of the crank handle and line A.

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

The following images are to be used to answer Question 2.



2. View Functionality: View Creation 2

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Dimension Type: Projected

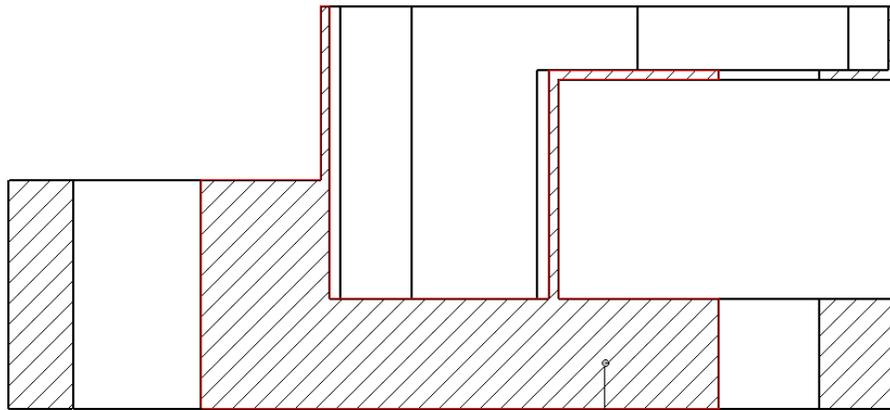
Use the drawing and Front view as created from Question 1.

Create the view AA projected from the created Front view.

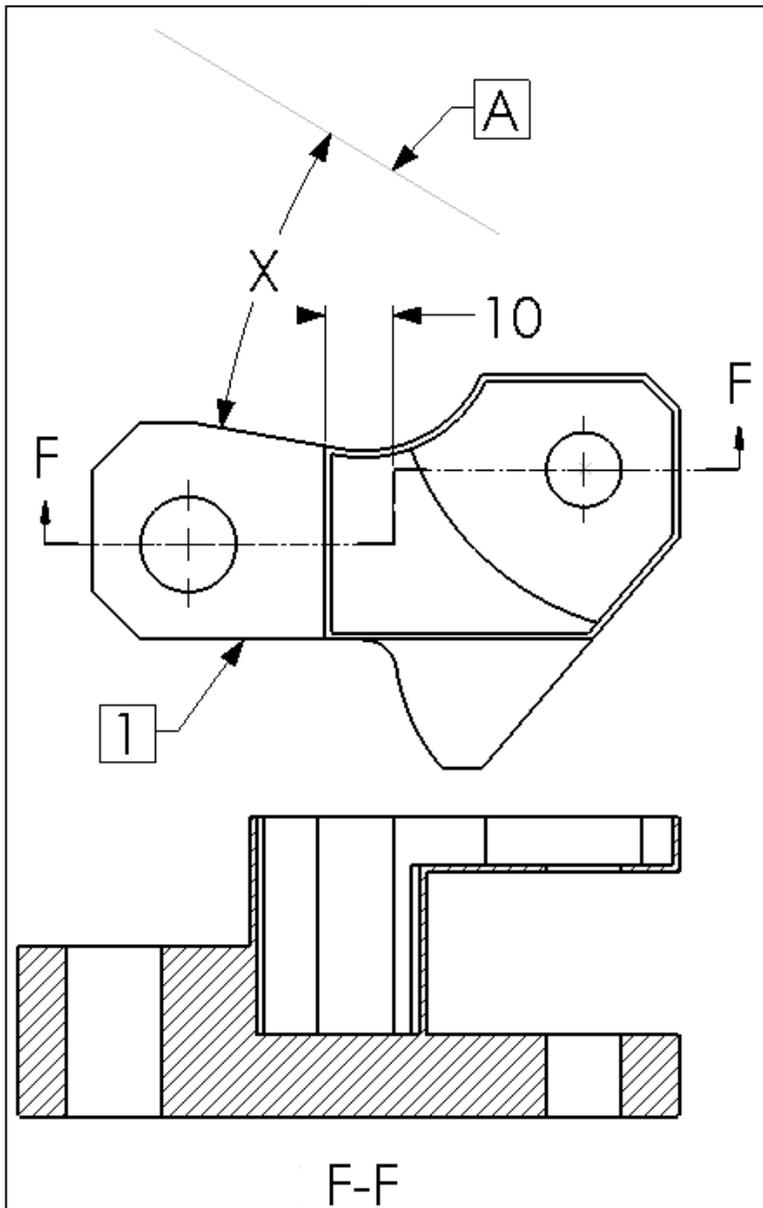
Create the angled dimension Y as shown in the image.

What is the value of Y (degrees)?

The following images are to be used to answer Question 3.



Area:	Y mm ²
Perimeter:	mm



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.

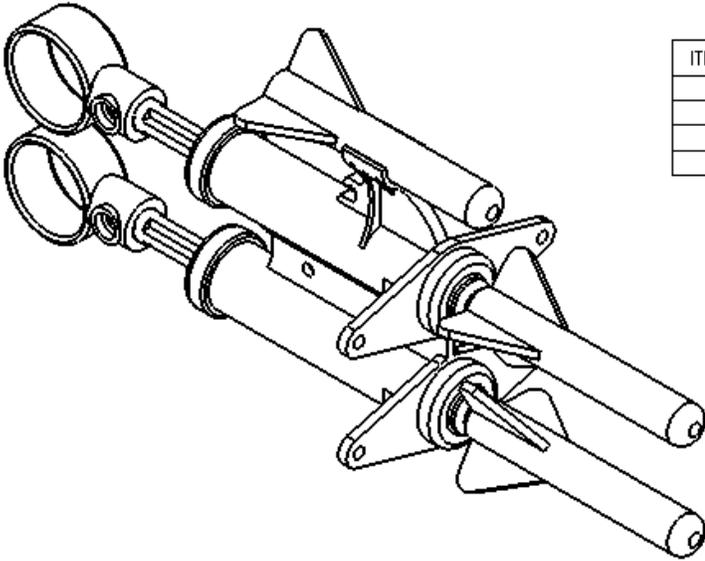
Note: Use the included dimensions in the image to aid in the creation of View F-F.

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 (mm²)?

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

The following images are to be used to answer Question 4.



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

4. BOM Functionality: BOM Creation

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.

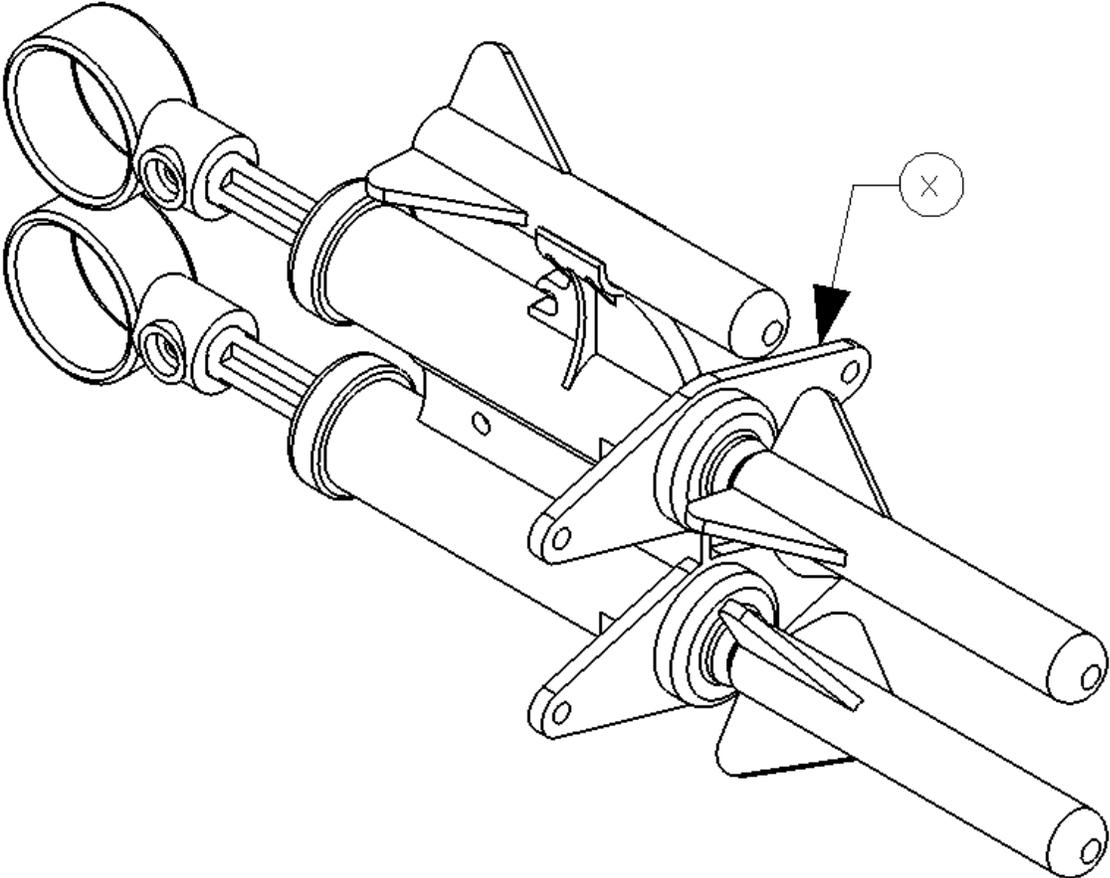
Create a new Bill of Material Table with the following options:

- 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"

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

The following image is to be used to answer Question 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"?

The following image is to be used to answer Question 6.

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

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?

END OF TEST

Answer Key

1. b) 20.85 degrees
2. 22.01 degrees
3. 924.12 mm²
4. a) Qty: 2
5. Item 1
6. 33.64

Frequently Asked Questions

Below is a series of common questions regarding SOLIDWORKS Certifications. To peruse more FAQs, please visit the SOLIDWORKS Certification FAQ page under **Home > Support > Certification > FAQ**.

1. What is the Certified SOLIDWORKS Professional Advanced Drawing Tools (CSWPA-DT) exam?

The CSWPA-DT exam is a comprehensive, non-proctored online exam that tests an individual's understanding of the tools and functionality found in the SOLIDWORKS Drawing environment.

2. What resources do I need to take the CSWPA-DT?

The CSWPA-DT test is an online test that can be taken on any computer that has SOLIDWORKS running and a connection to the Internet. **You are responsible for providing your own working copy of SOLIDWORKS. A commercial license of SOLIDWORKS or the SOLIDWORKS Student Edition will be adequate for the exams.**

The test runs in its own client window separate from SOLIDWORKS. You can either run the exam software on the same computer as your SOLIDWORKS software or in a separate computer next to the one running SOLIDWORKS. Please note that if you are taking the test on a separate computer that you have some means to transfer files from the computer running the testing client to the computer running SOLIDWORKS. Dual monitors are recommended but not required.

As stated above, an internet connection is required for the exam. At this point there are no provisions for a stand-alone exam.

3. What is the policy on retaking the CSWPA?

There is a 30-day waiting period before retaking the CSWA and any Advanced CSWP exam. There is a 14-day waiting period before retaking any CSWP segment exam. Also, the user will be required to purchase another exam credit to retake the test.

4. What do I receive when I pass the exam?

You will receive certificates for each exam that you pass. You receive an email that directs you to our electronic certificate access page. There you can login and download your electronic certificate(s) and electronic business card logo(s); CSWPs also receive discounts to partner products and SOLIDWORKS World events. For more information refer to www.solidworks.com/cswp.

5. Can the exam be paused?

No. Once started, exams cannot be paused.

6. I took the exam and my Internet connection failed when the test ended. How do I report my results now?

The tester software will retry to connect for ~2 minutes. If the connection is still not available, an error message will be displayed and a TXT file will be saved on your desktop. The name of the file is: Tangix_TesterPro_Error_Date_Time.

Please send this file to support@tangix.com

7. Will my answers be lost if my computer crashes? Will I lose my testing credit/have to pay again if my computer crashes?

You will have to start the examination over and no refund will be available. Once you click 'take exam' your exam credit will be redeemed and we cannot refund your payment or voucher. If your computer crashes, your answers are not recoverable.

8. Which commercial version of the software should I use to take the CSWPA exams?

For all exams, the minimum version necessary is listed on the information page of that exam. Please go to <http://www.solidworks.com/certification> and click on the individual exam information page links on the left.

9. Will a certificate be mailed out to me once I pass an exam?

SOLIDWORKS no longer mails out certificates to individuals who have passed an exam. We have made it a simple download that you can print from your computer so you no longer have to wait to receive it. To print your certificate, simply visit www.virtualtester.com/solidworks/user.php. On that page, simply click the "Print My Certificate" button and follow the on-screen instructions. Please note that not all exams have printable certificates.

Helpful Sites

SOLIDWORKS Home:

www.SOLIDWORKS.com

SOLIDWORKS Resource Center:

<http://www.SOLIDWORKS.com/sw/resources.htm>

SOLIDWORKS YouTube Channel:

<https://www.youtube.com/user/SOLIDWORKS>

MySOLIDWORKS:

my.SOLIDWORKS.com

Training Pages:

<http://www.SOLIDWORKS.com/sw/support/software-training-certification.htm>