

SOLIDWORKS Certification Exam Guide & Practice Test



**CSWPA-SU: Certified
SOLIDWORKS Professional
Advanced Surfacing**

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About This Guide

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

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

The CSWPA-SU 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-SU Exam?

The Surfacing certification sets you apart as a person who has successfully demonstrated their ability to use SOLIDWORKS Advanced Surfacing tools. 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-SU Exam Details

The CSWPA-SU covers the following topics:

- Spline Creation
- 3D Curve Creation
- Boundary Surface
- Filled Surface
- Swept Surface
- Planar Surface
- Knit Surface
- Trim Surface
- Untrim Surface
- Move Face
- Extend Surface
- Fillet
- Thicken

Total Questions: 19

Total Points: 255

Points Needed to Pass: 190

Maximum Time: 90 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-SU 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-SU 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. 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.
3. 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.
4. 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.
5. This guide includes an answer key after the practice exam.
6. You should be ready to take the real CSWPA-SM exam if you can answer the four questions correctly in about 20-30 minutes.

Taking the Real Exam

The real exam can be taken on your personal computer at a time of your choosing. The CSWPA-SU 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.

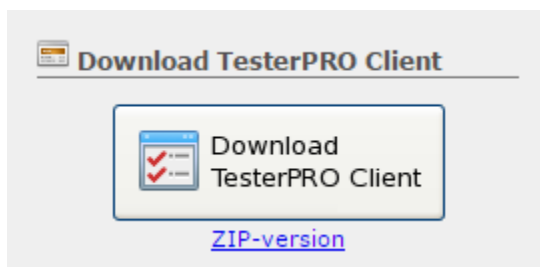
If you will be running the client on a separate computer from the one that is running SOLIDWORKS, make sure there is a way to transfer files from one computer to the other. You will be required to download SOLIDWORKS files during the real test to be able to correctly answer some of the questions.

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

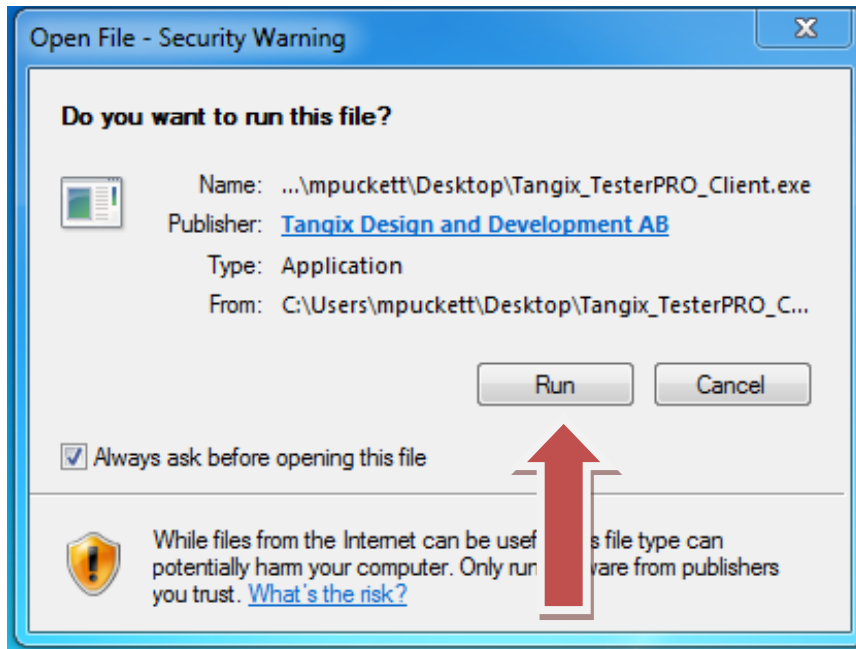
<http://my.SOLIDWORKS.com/mylearning/lessons/489/installing-and-viewing-the-test-software>

Alternatively, you may follow these steps:

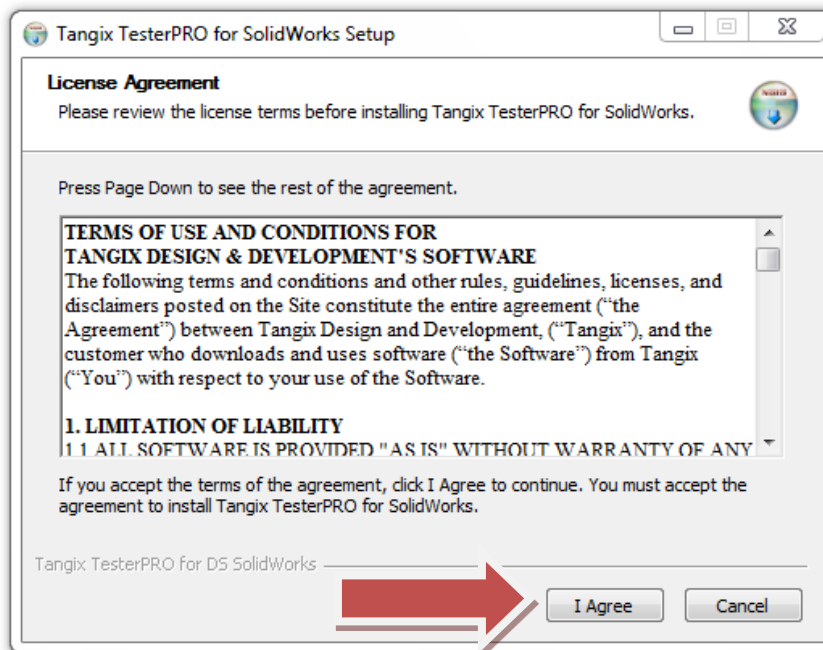
1. Visit the SOLIDWORKS VirtualTester Certification Center at <https://SOLIDWORKS.virtualtester.com/>.
2. Locate and click the button (right hand side of page) to download the Tangix TesterPRO Client:



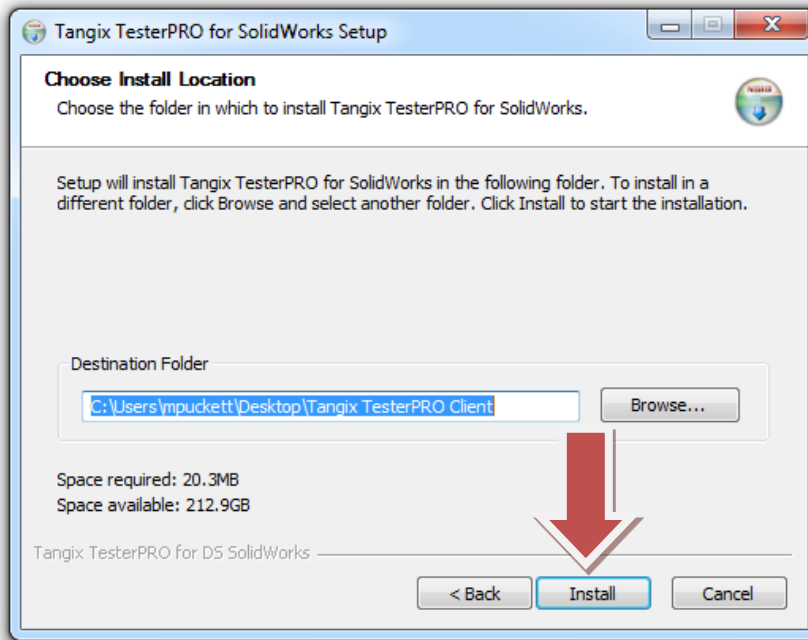
3. Open the downloaded folder and run the executable file:



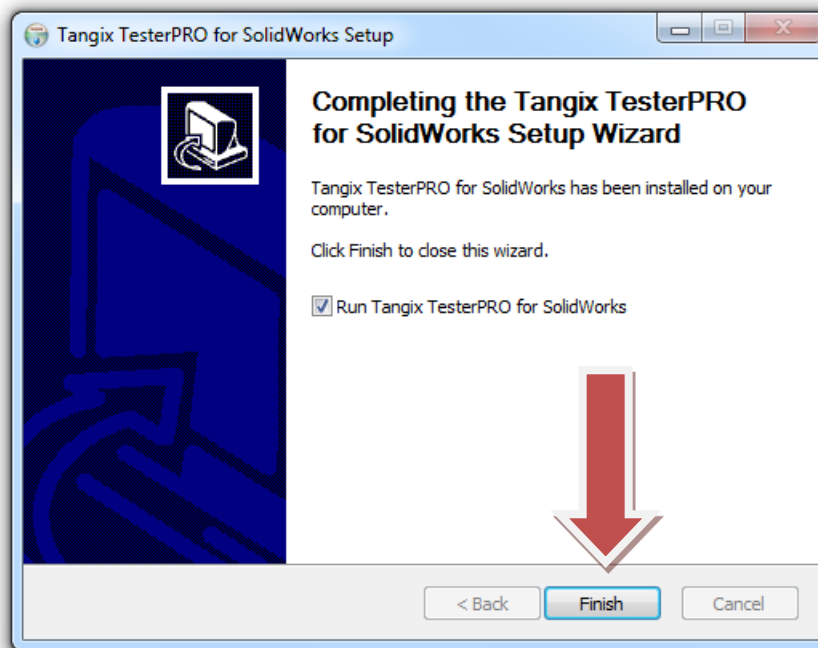
4. Agree to the License Agreement.



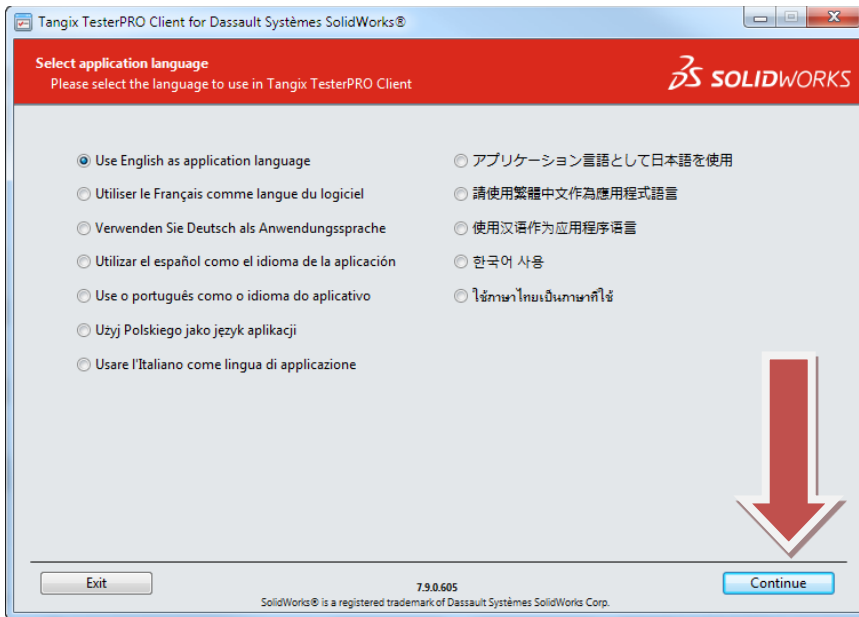
5. Click the install button.



6. Click the finish button.

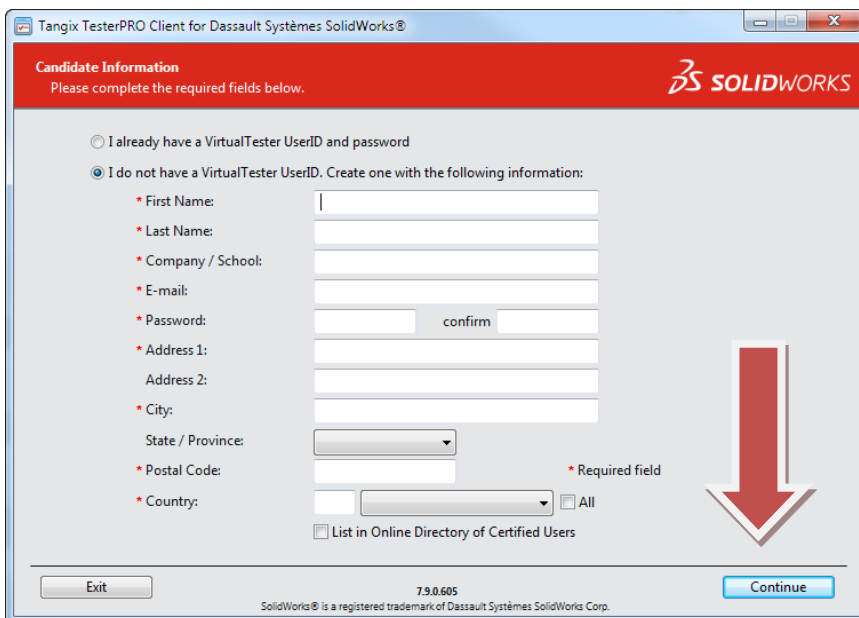


7. When you run the program, select your language and click Continue.



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

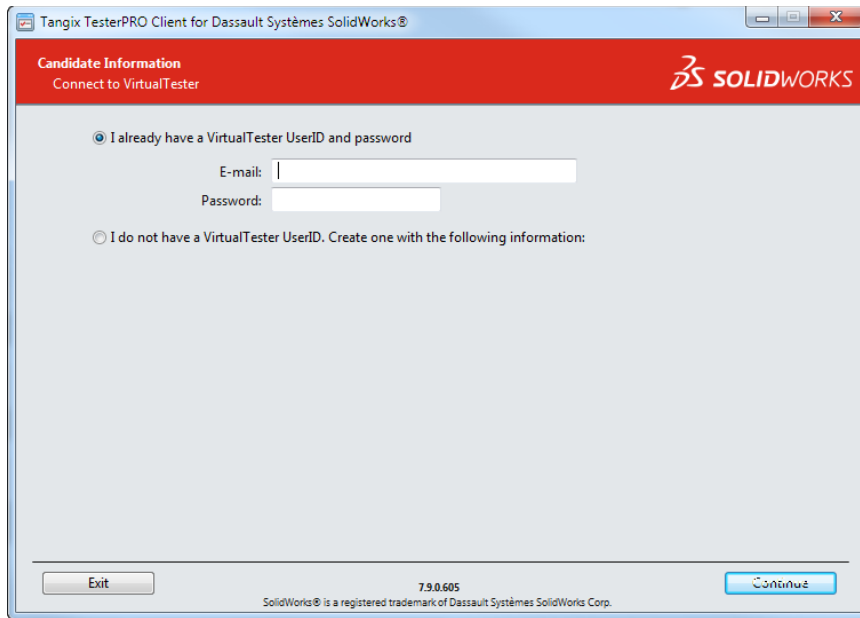
8. If this is your first exam, you will need to create an account. Fill in the required fields and click continue:



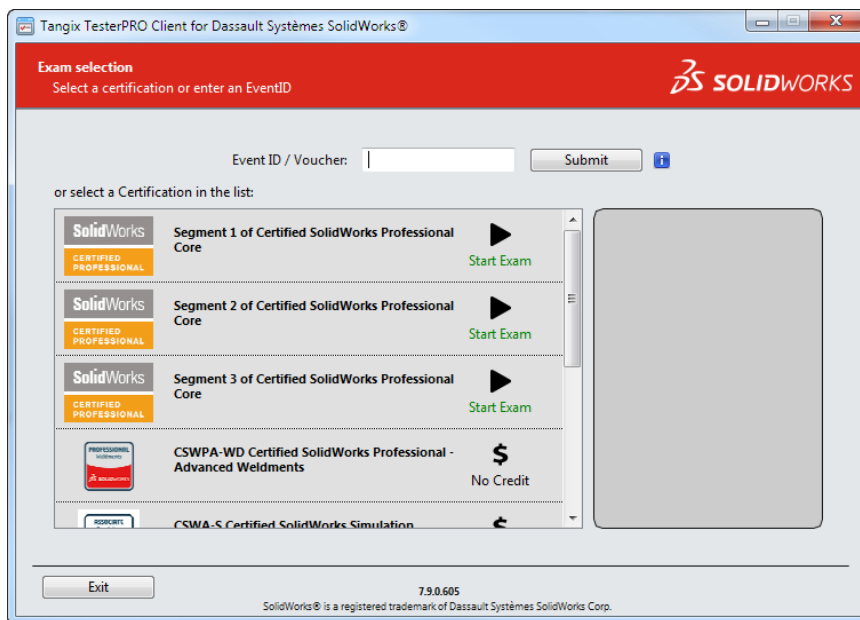
Write down your login credentials for future use!

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.



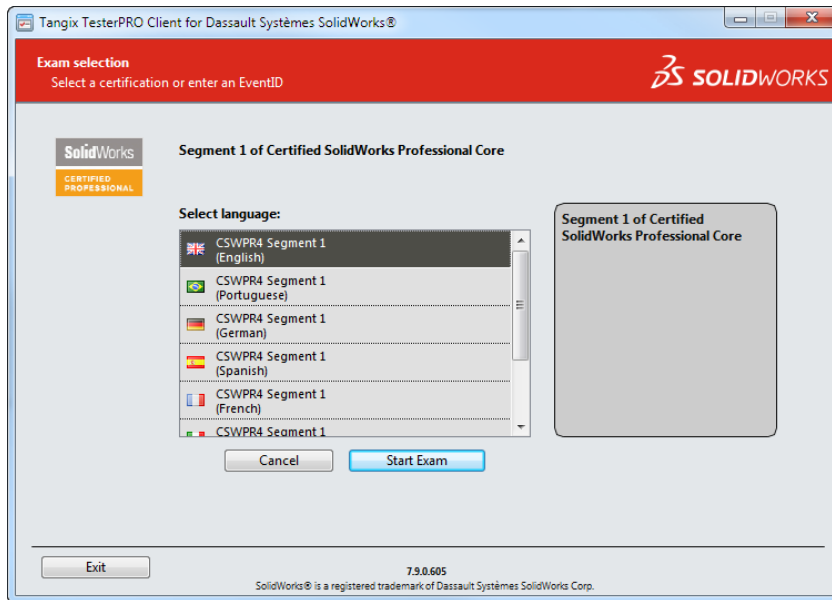
10. On the exam selection page select an exam that has the words 'Start Exam' next to it (only exams that you have credits for will show as available):



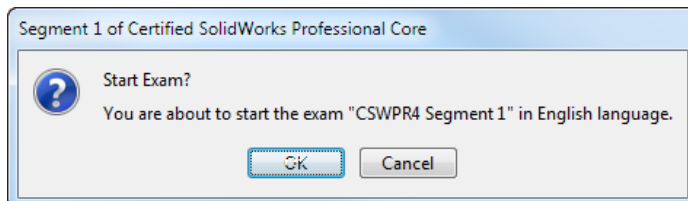
If you do not have credit for the exam, do one of the following:

- 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**.

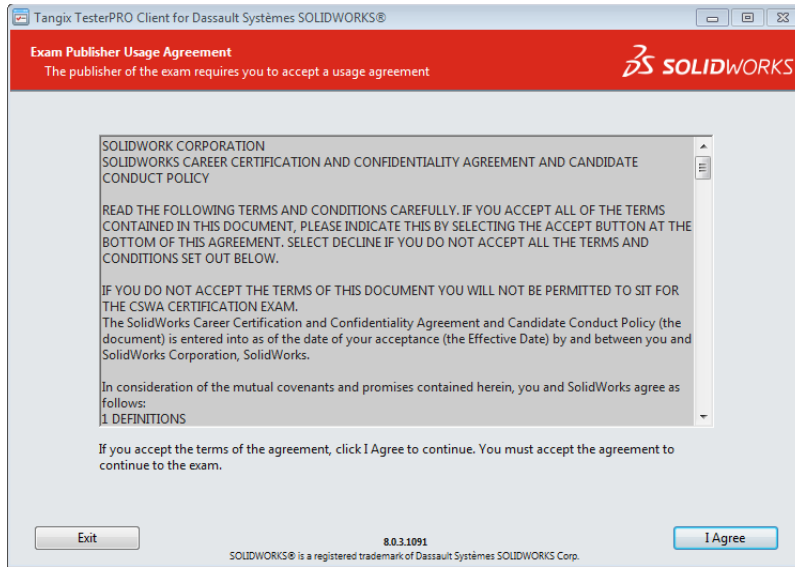
11. You may be asked to select a language. Select a language and click "Start Exam."



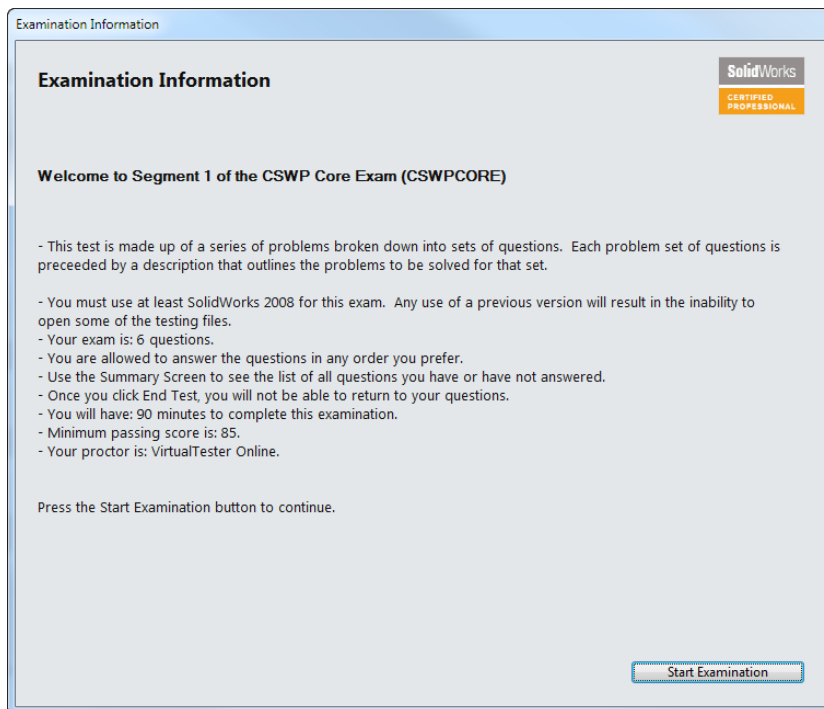
12. Confirm the exam you are about to begin:



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



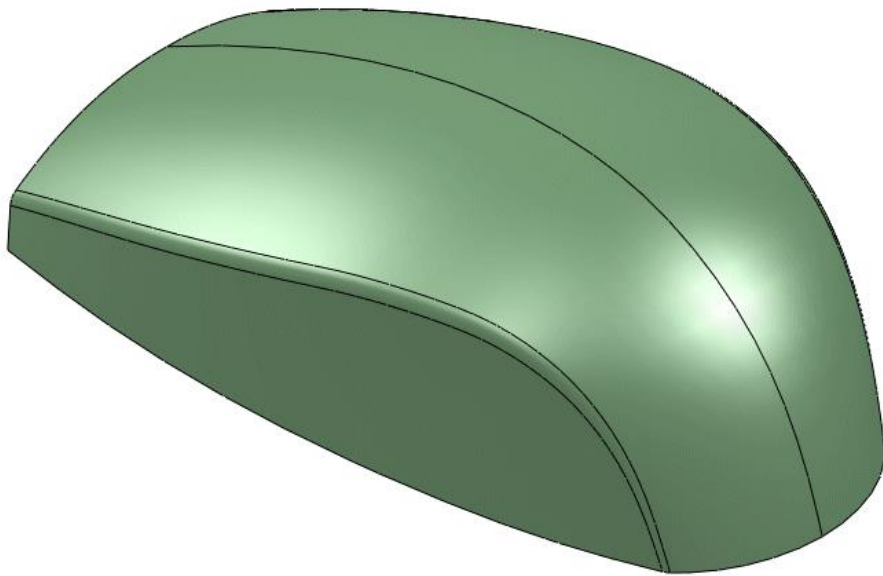
14. On the Examination Information page, read the information and then click "Start Examination", this will begin the timed portion of your exam.



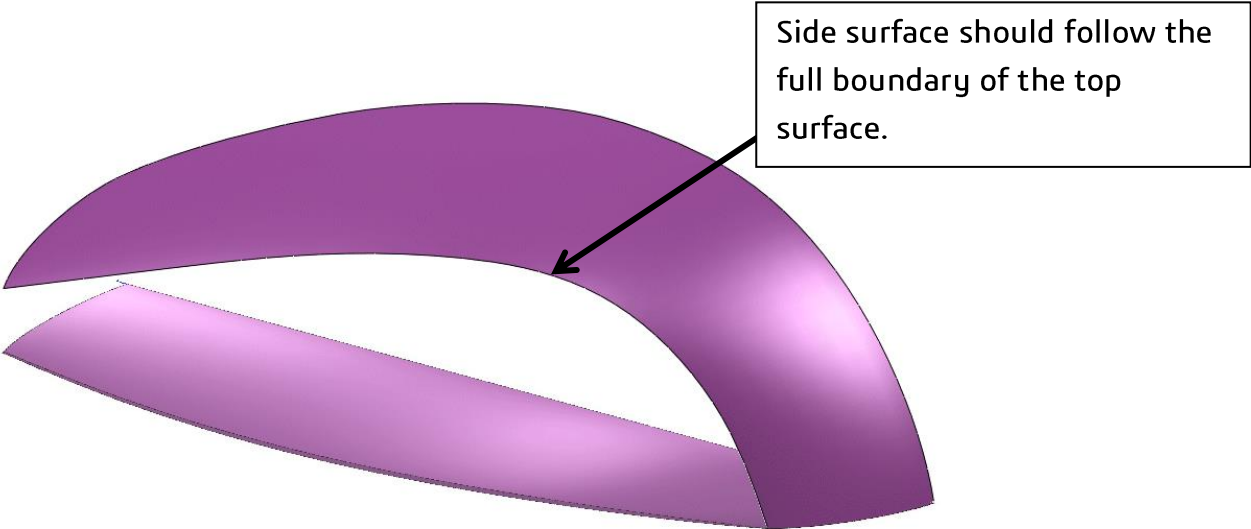
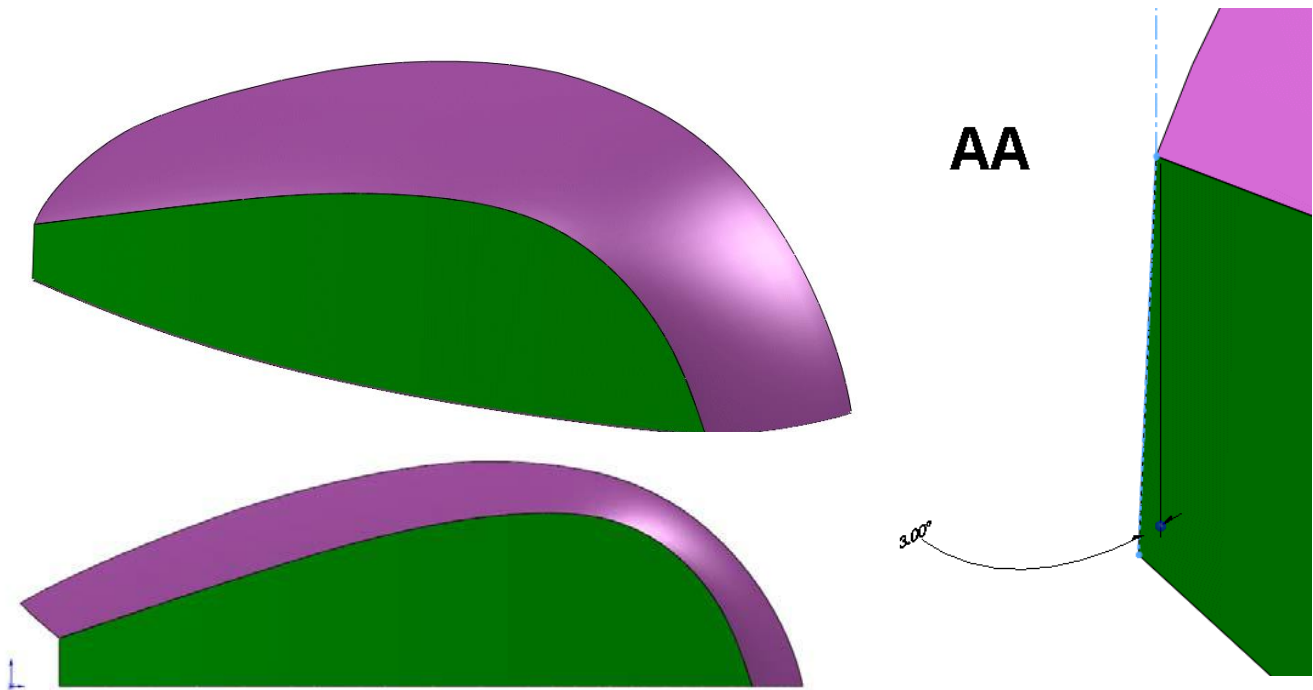
The practice exam begins on the next page.

Test Questions

Problem Description: A new computer mouse is being developed. A colleague from another company has developed the top-right mouse surface using another 3D CAD system. Also supplied is a sketch picture that contains the "footprint" of the mouse. You will have to open the part that contains the imported surface and sketch picture and create a side surface, fillet, and other operations to complete the mouse per the instructions given.



Use the following images for Question 1.



1. Design this part in SOLIDWORKS using Surfacing features.

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

Material = None

Open the SOLIDWORKS part 'Imported_surface_and_sketch_picture.SLDPRT'. It contains a surface imported from another CAD system and a Sketch Picture in Sketch123.

Create a surface on the side using either Swept Surface or Surface Fill.

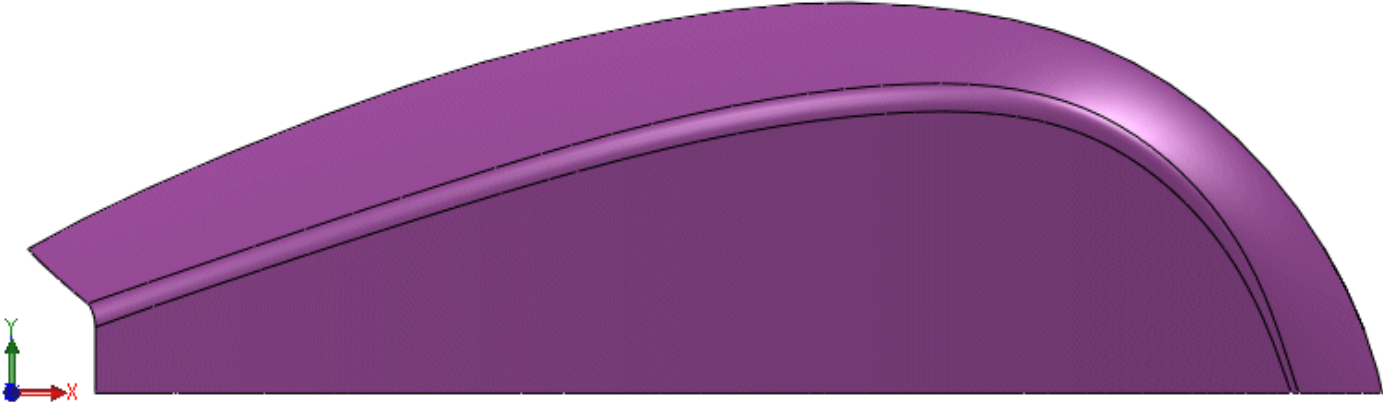
The surface should follow these rules:

- This surface should be flush with the XZ plane (Top plane).
- The surface should start with a profile parallel to the YZ plane (see Detail View AA) that is angled 3 degrees from the vertical along the full boundary of the imported surface (see image).
- The shape of the side surface should follow the contour of the "footprint" in the Sketch Picture (found in Sketch123).

After creating the surface, measure its surface area.

What is the surface area of the side surface (mm²)?

Use this image for Question 2.



2. Create a curvature continuous fillet surface connecting the top and side surfaces.

Fillet radius = 3 mm

Fillet travels the full length between the top and side surfaces

What is the surface area of the fillet (in mm^2)? (within $\pm 10 \text{ mm}^2$)

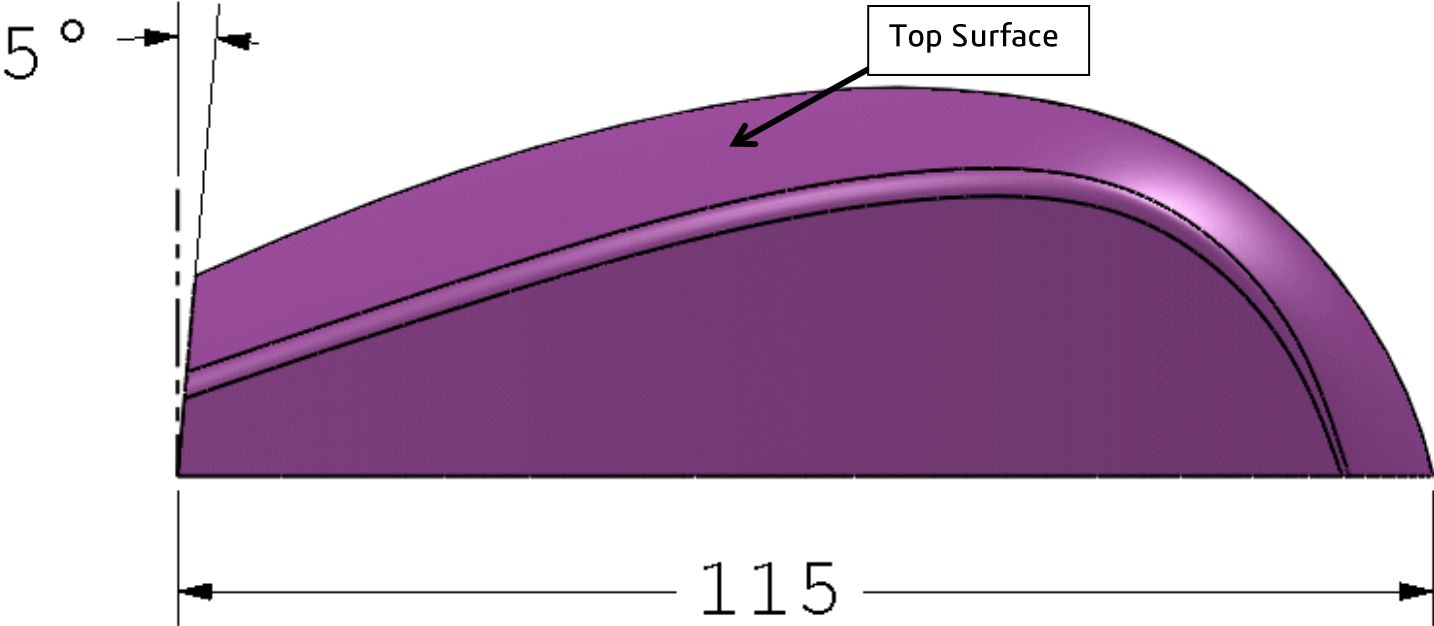
A) 322.50

B) 348.10

C) 374.10

D) 399.30

Use this image for Question 3.



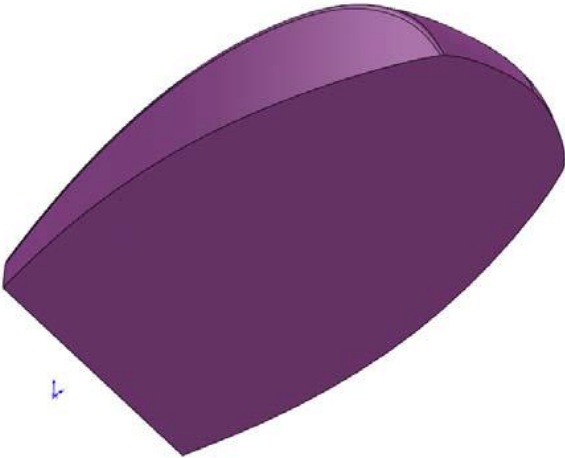
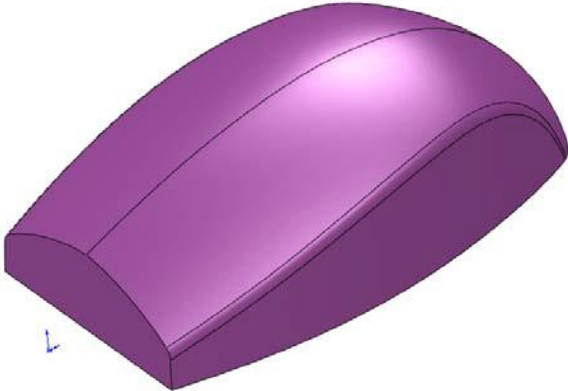
3. Trim surfaces at the end of the mouse.

Trim the surfaces at the end of the mouse at an angle of 5 degrees while keeping the length of the mouse as shown in the image.

Measure the top surface.

What is the surface area of the top surface (mm^2)?

Use these images for Question 4.



4. Complete the solid.

Material = ABS (Density = 0.00102 g/mm^3)

Mirror the existing surfaces and complete the steps to create the solid of the completed part.

Apply the material ABS to the solid.

What is the mass of the resulting solid (grams)?

END OF TEST

Answer Key

1. $2220.93 \text{ mm}^2 \pm 7 \text{ mm}^2$
2. B
3. $3723.81 \text{ mm}^2 \pm 40 \text{ mm}^2$
4. $176.87 \text{ grams} \pm 3.5 \text{ grams}$

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 Surfacing (CSWPA-SU) exam?

The CSWPA-SU exam is a comprehensive, non-proctored online exam that tests an individual's ability to use SOLIDWORKS Advanced Surfacing tools.

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

The CSWPA-SU 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>