

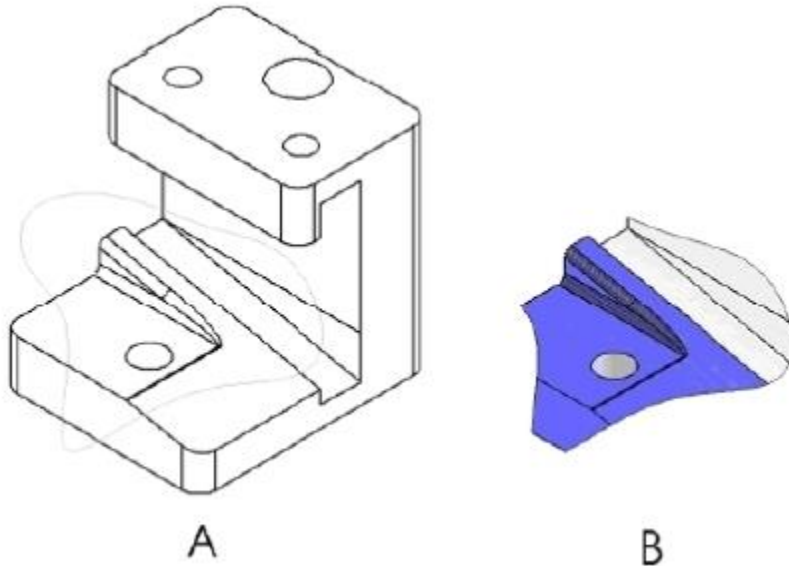
SOLIDWORKS Certification Exam Guide & Practice Test



**CSWA: Certified
SOLIDWORKS Associate**

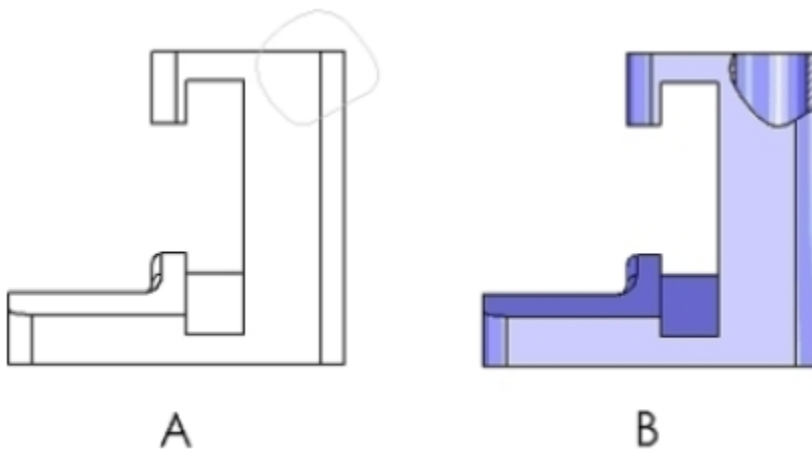
Test Questions

Part 1: Drafting Competencies



1. To create drawing view 'B' it is necessary to sketch a spline (as shown) on drawing view 'A' and insert which SOLIDWORKS view type?

- a) Section
- b) Crop
- c) Projected
- d) Isometric

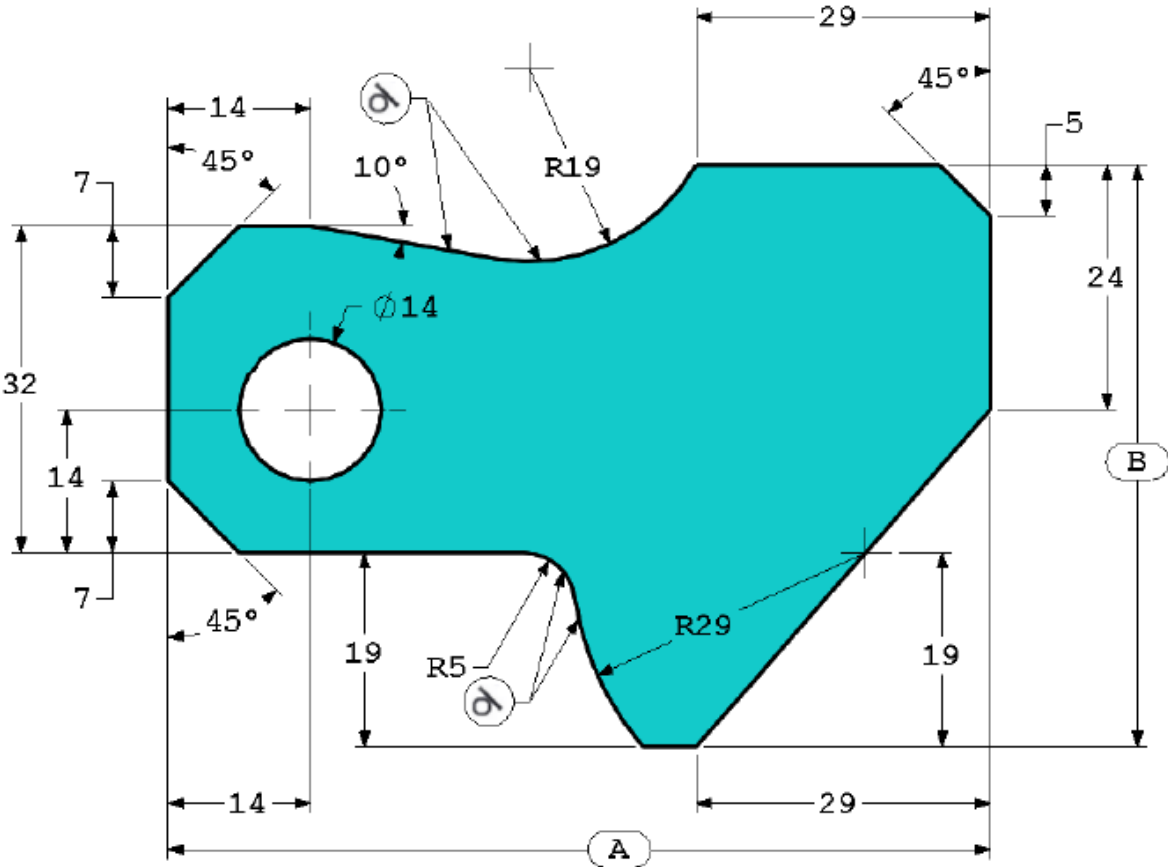
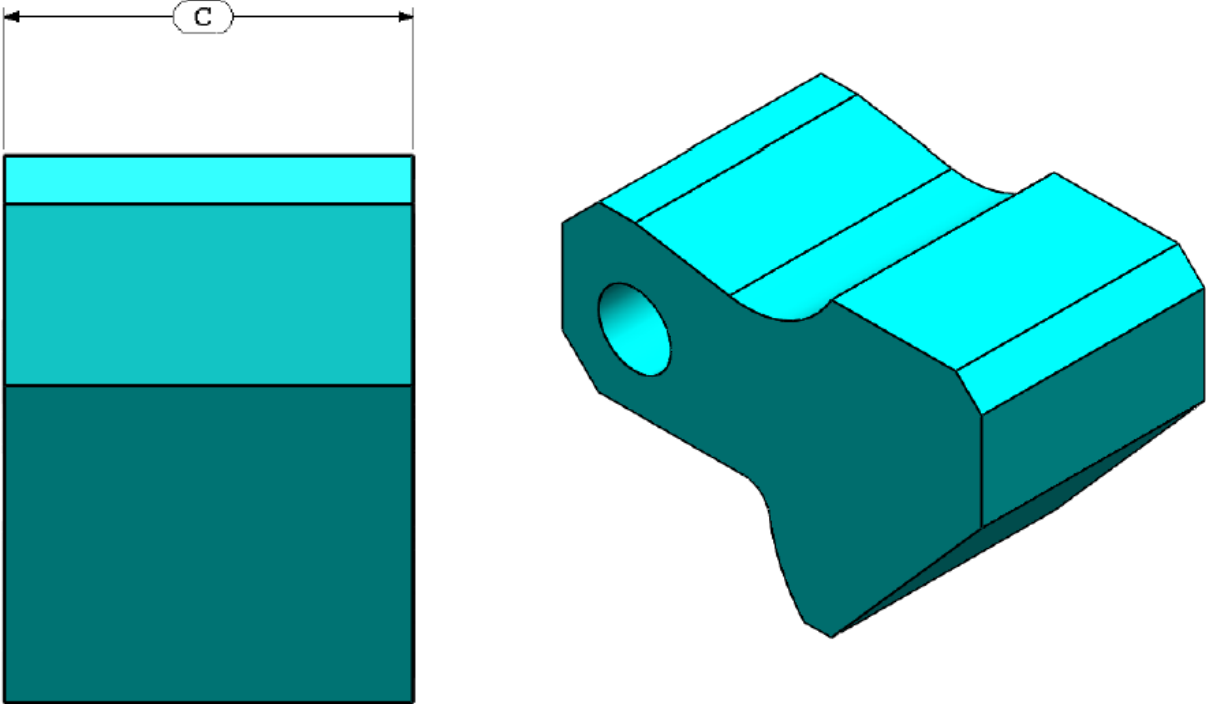


2. To create drawing view 'B' it is necessary to sketch a spline (as shown) on drawing view 'A' and insert which SOLIDWORKS view type?

- a) Aligned Section
- b) Detail
- c) Broken-out Section
- d) Section

Part 2: Part Modeling

The following images are to be used to answer Questions #3 – 4.



3. Part (Tool Block) - Step 1

Build this part in SOLIDWORKS.

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

All holes through all unless shown otherwise.

Material: AISI 1020 Steel

Density = 0.0079 g/mm³

A = 81.00

B = 57.00

C = 43.00

What is the overall mass of the part (grams)?

Hint: If you don't find an option within 1% of your answer please re-check your solid model.

a) 1028.33

b) 118.93

c) 577.64

d) 939.54

REMINDER: Save your part in a different file after each question in case it must be reviewed.

4. Part (Tool Block) - Step 2

Modify the part in SOLIDWORKS.

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

All holes through all unless shown otherwise.

Material: AISI 1020 Steel

Density = 0.0079 g/mm³

Use the part created in the previous question and modify it by changing the following parameters:

A = 84.00

B = 59.00

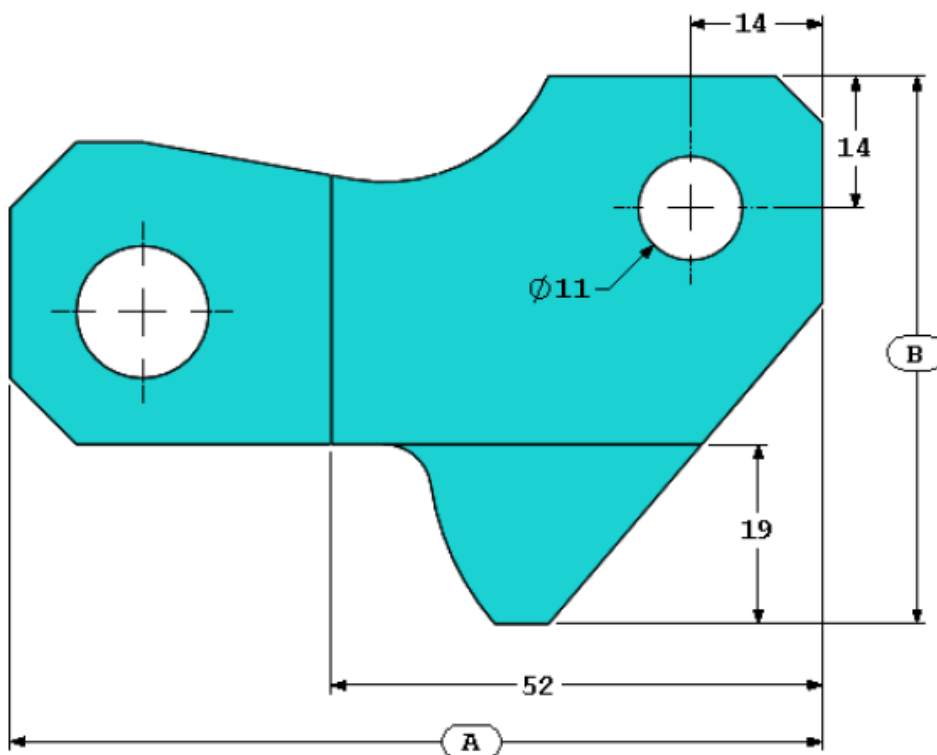
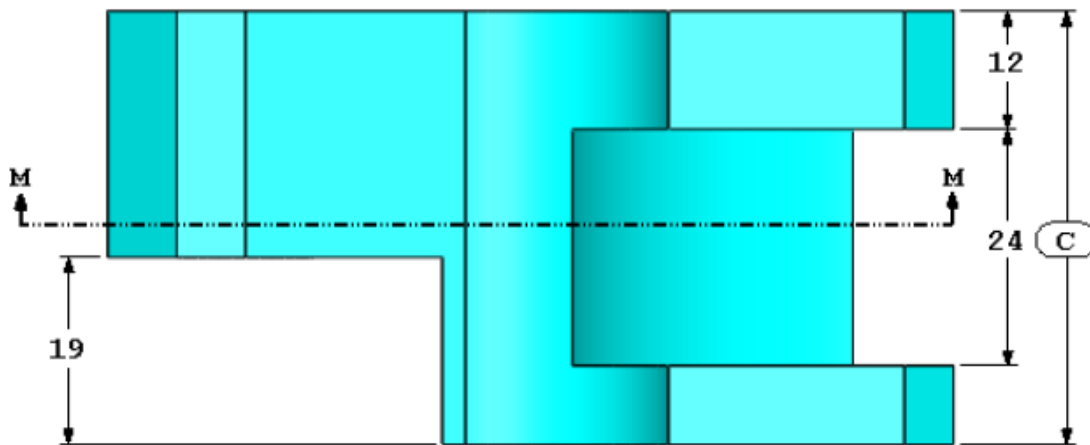
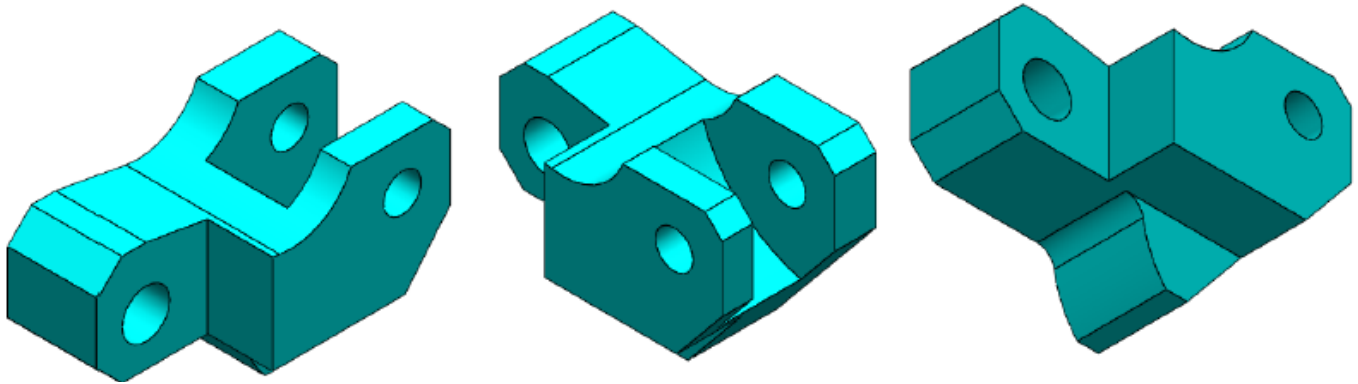
C = 45.00

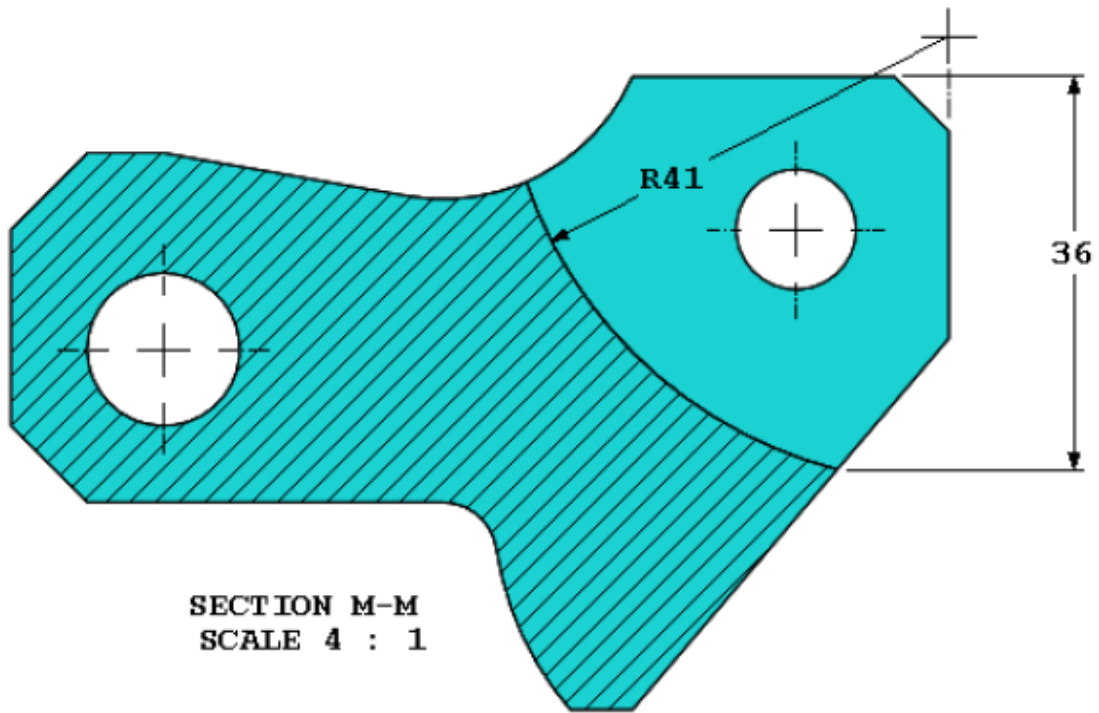
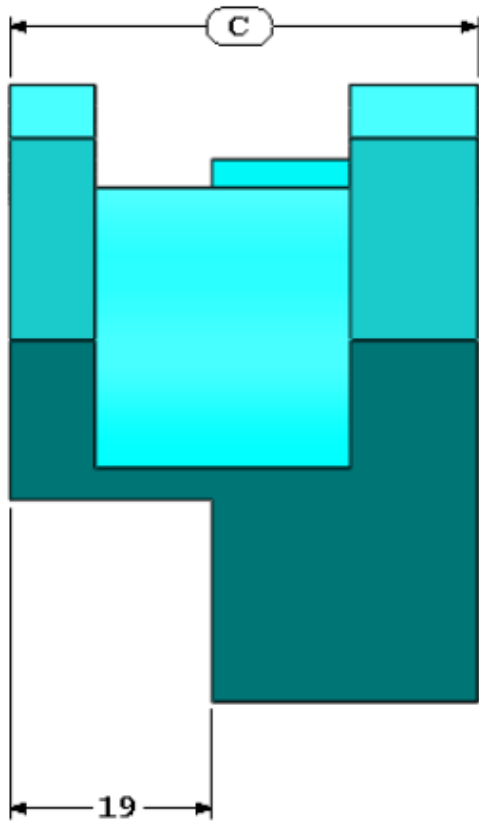
Note: Assume all other dimensions are the same as in the previous question.

What is the overall mass of the part (grams)?

Part Modeling (continued)

These images are to be used to answer Question #5.





5. Part (Tool Block) - Step 3

Modify the part in SOLIDWORKS.

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

All holes through all unless shown otherwise.

Material: AISI 1020 Steel

Density = 0.0079 g/mm³

Use the part created in the previous question and modify it by removing material and also by changing the following parameters:

A = 86.00

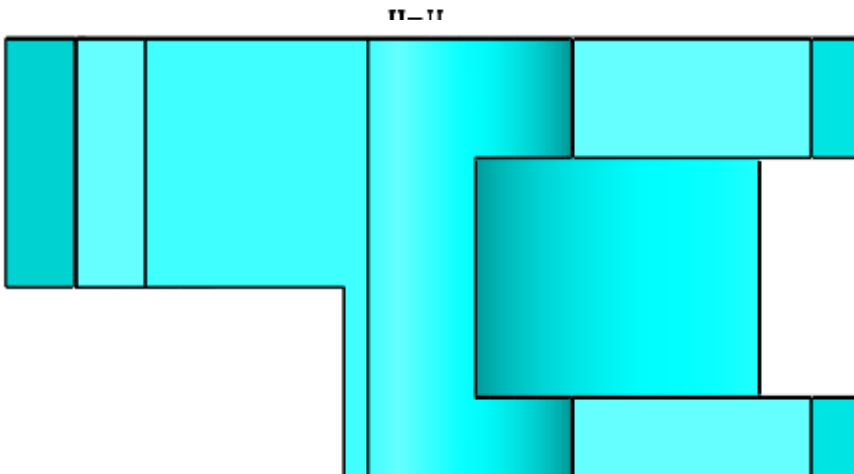
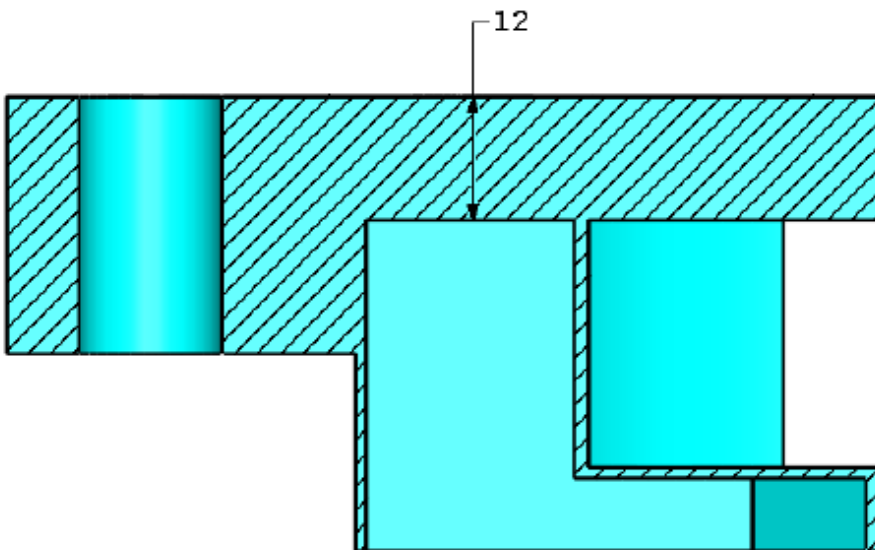
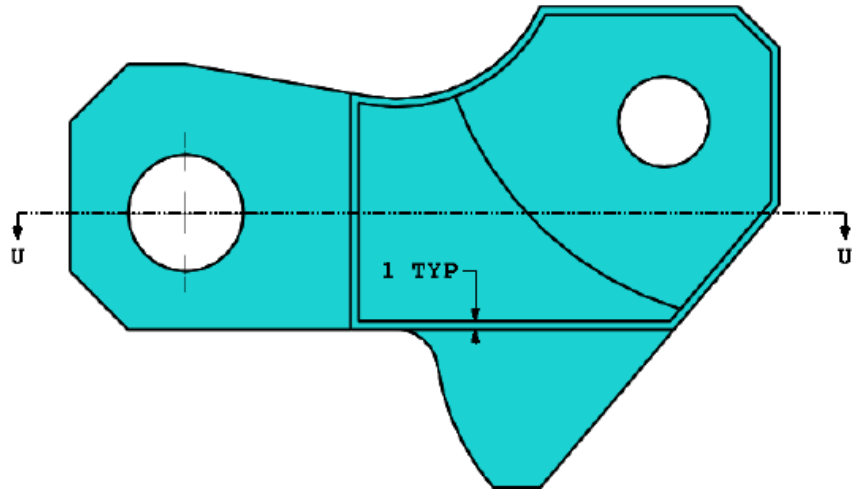
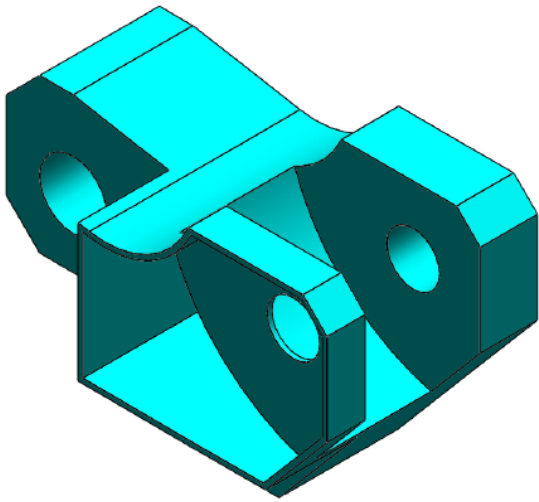
B = 58.00

C = 44.00

What is the overall mass of the part (grams)?

Part Modeling (continued)

These images are to be used to answer Question #6.



6. Part (Tool Block) - Step 4

Modify this part in SOLIDWORKS.

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

All holes through all unless shown otherwise.

Material: AISI 1020 Steel

Density = 0.0079 g/mm³

Use the part created in the previous question and modify it by adding a pocket.

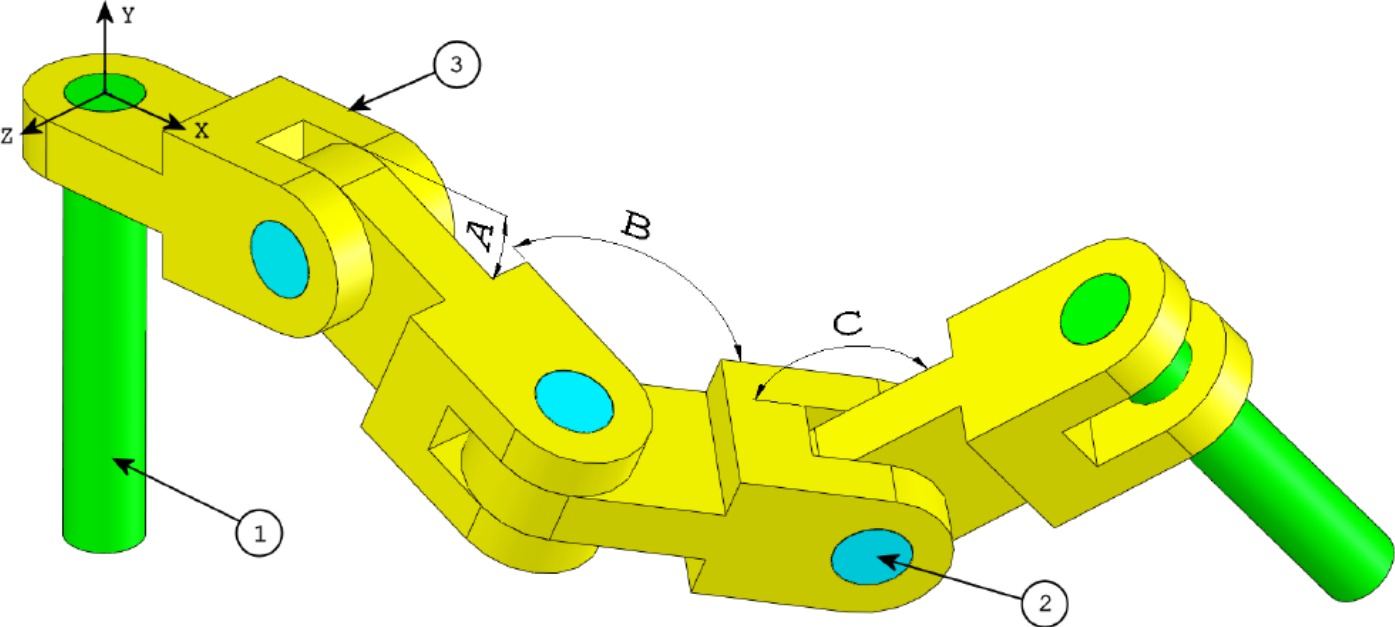
Note 1: Only one pocket on one side is to be added. This modified part is not symmetrical.

Note 2: Assume all unspecified dimensions are the same as in the previous question #5.

What is the overall mass of the part (grams)?

Part 3: Assembly Modeling

This image is to be used to answer Questions #7 – 8.



7. Build this assembly in SOLIDWORKS (Chain Link Assembly)

- Download the attached zip file and open it.
- Save the contained parts and open those parts in SOLIDWORKS. (Note: If SOLIDWORKS prompts "Do you want to proceed with feature recognition?" please click "No".)
- IMPORTANT: Create the Assembly with respect to the Origin as shown in isometric view. (This is important for calculating the proper Center of Mass)
- Create the assembly using the following conditions:

1. Pins are mated concentric to chain link holes (no clearance).
2. Pin end faces are coincident to chain link side faces.

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Assembly origin: As shown in image

A = 25 degrees

B = 125 degrees

C = 130 degrees

What is the center of mass of the assembly (millimeters)?

Hint: If you don't find an option within 1% of your answer please re-check your assembly.

a) X = 348.66, Y = -88.48, Z = -91.40

b) X = 308.53, Y = -109.89, Z = -61.40

c) X = 298.66, Y = -17.48, Z = -89.22

d) X = 448.66, Y = -208.48, Z = -34.64

8. Modify the assembly in SOLIDWORKS. (Chain Link Assembly)

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Assembly origin: Arbitrary

Using the same assembly created in the previous question modify the following parameters:

A = 30 degrees

B = 115 degrees

C = 135 degrees

What is the center of mass of the assembly (millimeters)?

END OF TEST

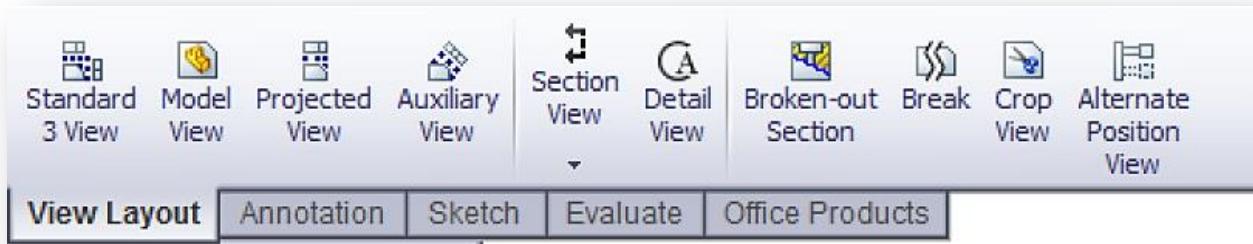
Answer Key

Answers:

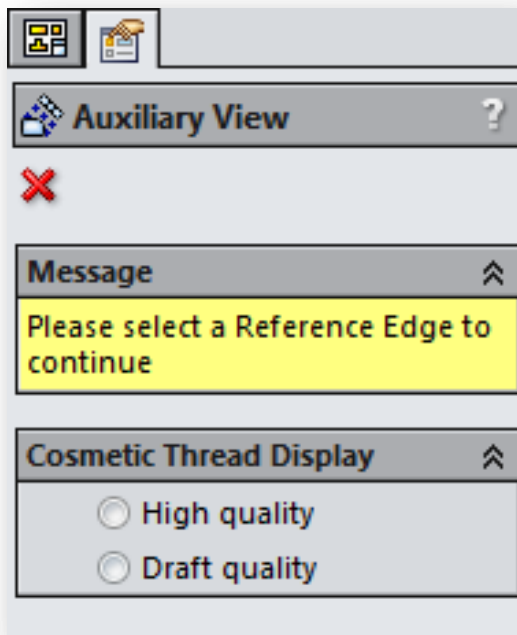
1. b) Crop
2. c) Broken-out Section
3. d) 939.54 g
4. 1032.32 g
5. 628.18 g
6. 432.58 g
7. a) $X = 348.66$, $Y = -88.48$, $Z = -91.40$
8. $X = 327.67$, $Y = -98.39$, $Z = -102.91$

Hints and Tips

- 1) To prepare for the Drafting Competencies section of the CSWA, review all the drawing views that can be created. These commands can be found by opening any drawing and going to the **View Layout** command manager toolbar or in the menu **Insert > Drawing View**.



- 2) For a detailed explanation of each View type, access the individual feature Help section by selecting the **Help** icon in the **Feature Manager** for that View Feature.



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 resources do I need to take the CSWA/CSWP?

The CSWA/P test is an on-line 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 CSWA/P exams. At this point there are no provisions for a stand-alone exam.

2. What is the policy on retaking the CSWA/CSWP?

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.

3. 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).

4. Can the exam be paused?

No. Once started, exams cannot be paused.

5. 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

6. 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.

7. 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>