

# SolidWorks Corporation: CSWP Sample Exam

## Certified SolidWorks Professional: Solid Modeling Specialist (CSWP-CORE)

These questions are an example of what to expect in Segment 1 of the CSWP-CORE exam.

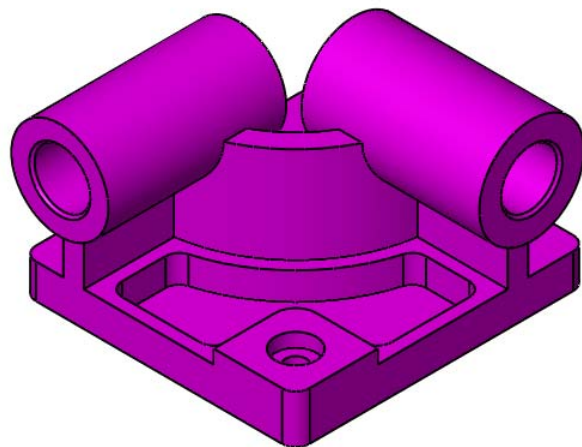
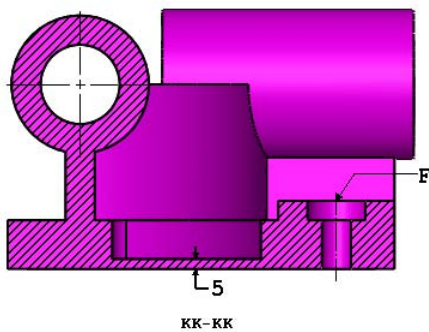
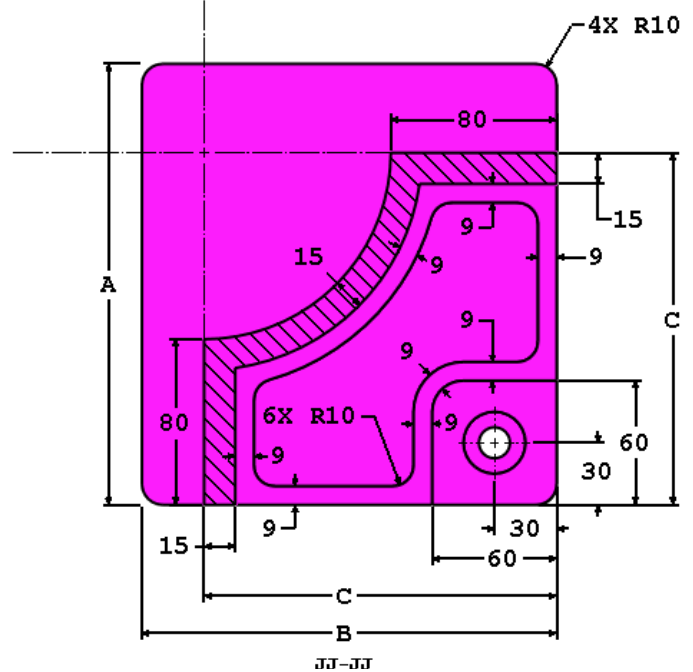
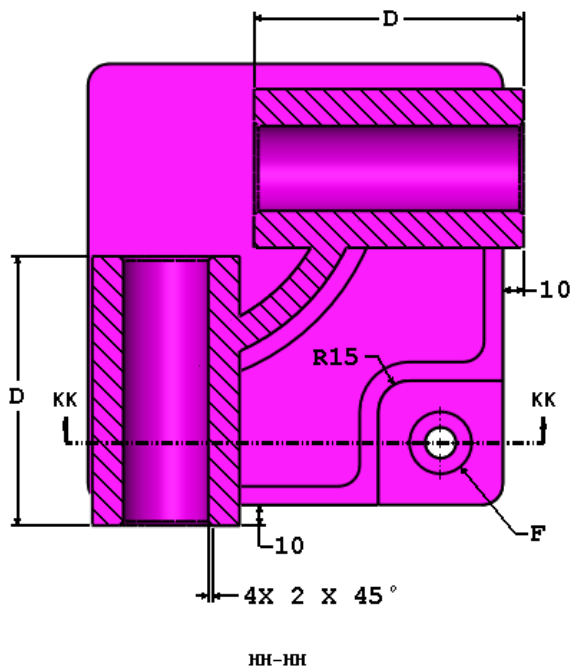
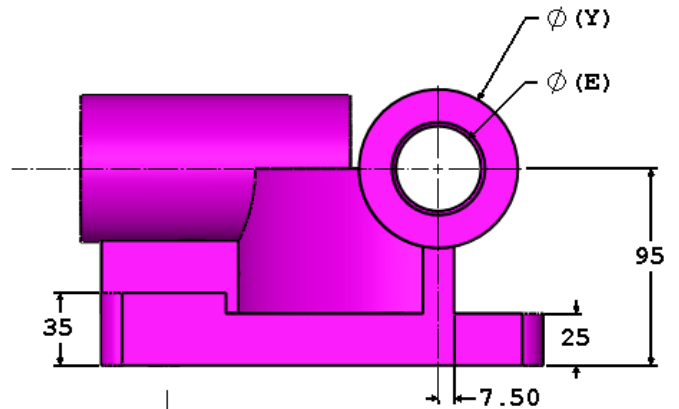
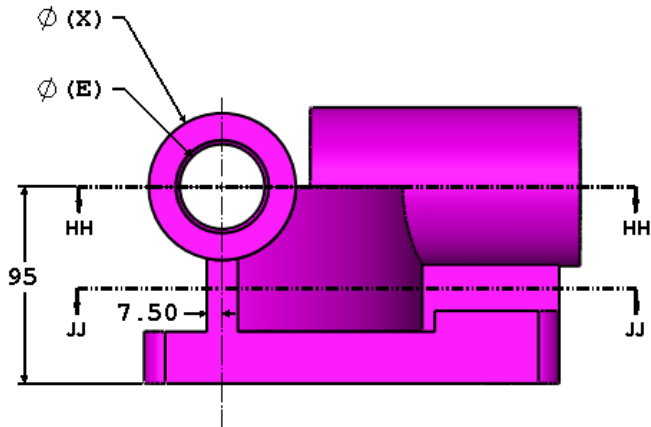
How to take this sample exam:

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 model at that point.
3. Answers to the questions are on the last pages of this sample test document. There are also hints that can help save time during the exam.
4. If you can complete this exam and get at least 4 out of the 5 questions correctly in 30 minutes or less then you should be ready to take the real CSWP exam.

What you will need for the real CSWP exam:

1. A computer that is running SolidWorks 2008 sp3.1 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.

Sample Exam – Initial Part (These images are to be used to answer Questions #1 – 3)



1. Initial part – Stage 1: Build this part in SolidWorks.

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

Material: Alloy Steel

Density = 0.0077 g/mm<sup>3</sup>

All holes through all unless shown otherwise

-Use the following parameters and equations which correspond to the dimensions labeled in the images:

A = 213 mm

B = 200 mm

C = 170 mm

D = 130 mm

E = 41 mm

F = Hole Wizard Standard: Ansi Metric Counterbore

Type: Hex Bolt – ANSI B18.2.3.5M

Size: M8

Fit: Close

Through Hole Diameter: 15.00 mm

Counterbore Diameter: 30.00 mm

Counterbore Depth: 10.00 mm

End Condition: Through All

X = A/3

Y = B/3 + 10mm

Hint #1: The dimensions that are to be linked or updated and are variable will be labeled with letters. Any dimensions that are simple value changes from one stage to another will be circled in the images.

Hint #2: To save the most time, make use of linked dimensional values and equations.

-Measure the mass of the part.

What is the mass of the part (grams)?

a) 14139.65

b) 14298.56

c) 15118.41

d) 14207.34

2. Update parameters of the initial part.

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

Material: Alloy Steel

Density = 0.0077 g/mm<sup>3</sup>

All holes through all unless shown otherwise

-Use the following parameters and equations which correspond to the dimensions labeled in the images:

A = 225 mm

B = 210 mm

C = 176 mm

D = 137 mm

E = 39 mm

F = Hole Wizard Standard: Ansi Metric Counterbore

Type: Hex Bolt – ANSI B18.2.3.5M

Size: M8

Fit: Close

Through Hole Diameter: 15.00 mm

Counterbore Diameter: 30.00 mm

Counterbore Depth: 10.00 mm

End Condition: Through All

X = A/3

Y = B/3 + 10mm

Hint #1: The dimensions that are to be linked or updated and are variable will be labeled with letters. Any dimensions that are simple value changes from one stage to another will be circled in the images.

Hint #2: To save the most time, make use of linked dimensional values and equations.

-Measure the mass of the part.

What is the mass of the part (grams)?

3. Update parameters of the initial part.

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

Material: Alloy Steel

Density = 0.0077 g/mm<sup>3</sup>

All holes through all unless shown otherwise

-Use the following parameters and equations which correspond to the dimensions labeled in the images:

A = 209 mm

B = 218 mm

C = 169 mm

D = 125 mm

E = 41 mm

F = Hole Wizard Standard: Ansi Metric Counterbore

Type: Hex Bolt – ANSI B18.2.3.5M

Size: M8

Fit: Close

Through Hole Diameter: 15.00 mm

Counterbore Diameter: 30.00 mm

Counterbore Depth: 10.00 mm

End Condition: Through All

X = A/3

Y = B/3 + 10mm

Hint #1: The dimensions that are to be linked or updated and are variable will be labeled with letters. Any dimensions that are simple value changes from one stage to another will be circled in the images.

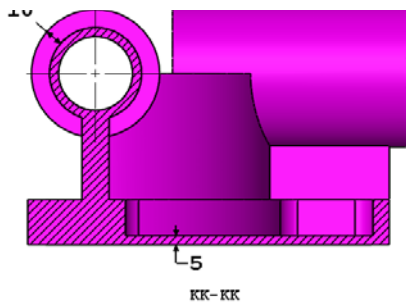
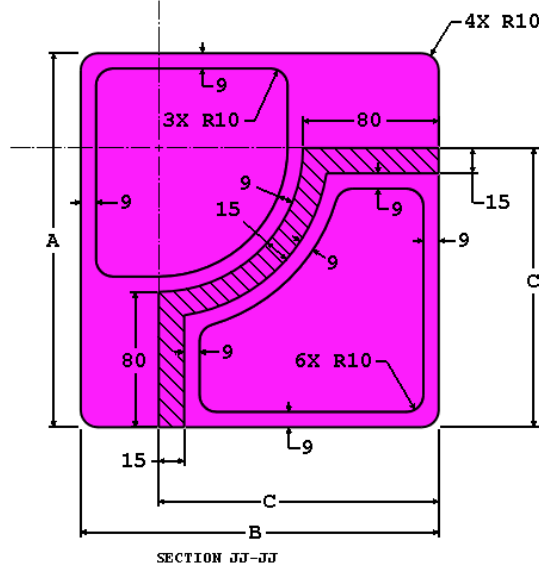
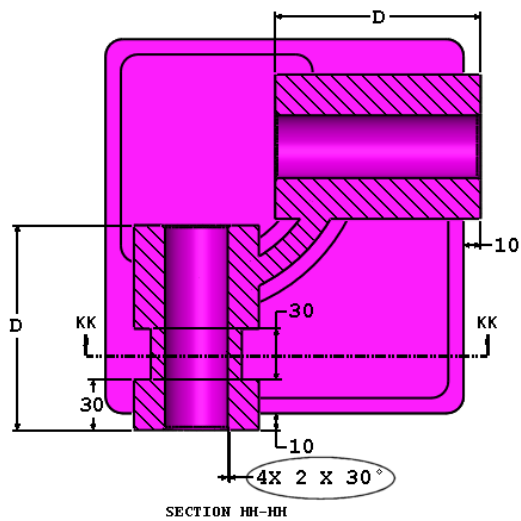
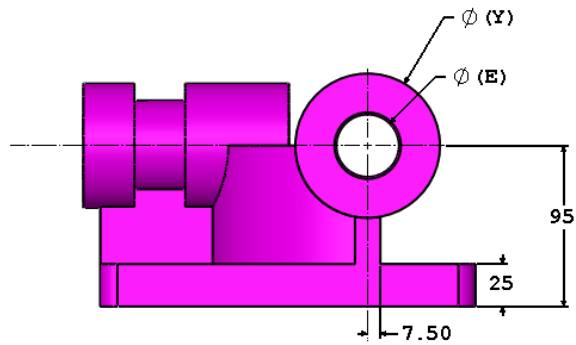
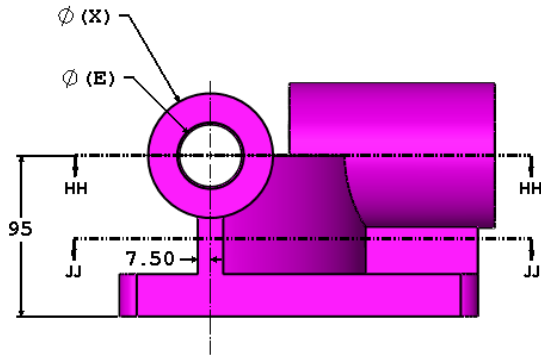
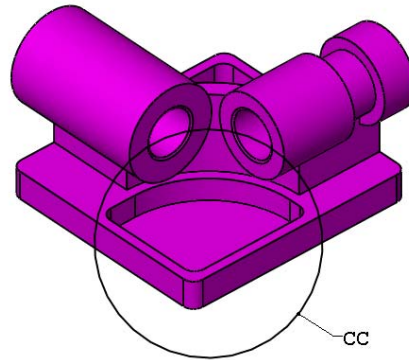
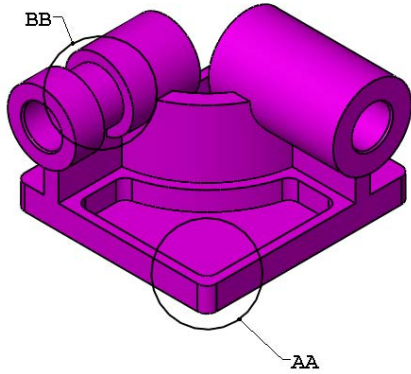
Hint #2: To save the most time, make use of linked dimensional values and equations.

-Measure the mass of the part.

What is the mass of the part (grams)?

Stage 2: Modify the part using the following dimensions (These images are to be used to answer Questions #4 and 5)

Note: The changes from the initial part are concentrated in areas AA, BB and CC shown in the first two images.



#### 4. Stage 2

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

Material: Alloy Steel

Density = 0.0077 g/mm<sup>3</sup>

All holes through all unless shown otherwise

-Use the following parameters and equations which correspond to the dimensions labeled in the images:

$$A = 221 \text{ mm}$$

$$B = 211 \text{ mm}$$

$$C = 165 \text{ mm}$$

$$D = 121 \text{ mm}$$

$$E = 37 \text{ mm}$$

$$X = A/3$$

$$Y = B/3 + 15\text{mm}$$

Note: The equation for Y has changed from the initial part.

Hint #1: The dimensions that are to be linked or updated and are variable will be labeled with letters. Any dimensions that are simple value changes from one stage to another will be circled in the images.

Hint #2: To save the most time, make use of linked dimensional values and equations.

-Measure the mass of the part.

What is the mass of the part (grams)?

a) 13095.40

b) 13206.40

c) 13313.35

d) 13395.79

## 5. Stage 2 – Update Parameters

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

Material: Alloy Steel

Density = 0.0077 g/mm<sup>3</sup>

All holes through all unless shown otherwise

-Use the following parameters and equations which correspond to the dimensions labeled in the images:

$$A = 229 \text{ mm}$$

$$B = 217 \text{ mm}$$

$$C = 163 \text{ mm}$$

$$D = 119 \text{ mm}$$

$$E = 34 \text{ mm}$$

$$X = A/3$$

$$Y = B/3 + 15\text{mm}$$

Note: The equation for Y has changed.

Hint #1: The dimensions that are to be linked or updated and are variable will be labeled with letters. Any dimensions that are simple value changes from one stage to another will be circled in the images.

Hint #2: To save the most time, make use of linked dimensional values and equations.

-Measure the mass of the part.

What is the mass of the part (grams)?

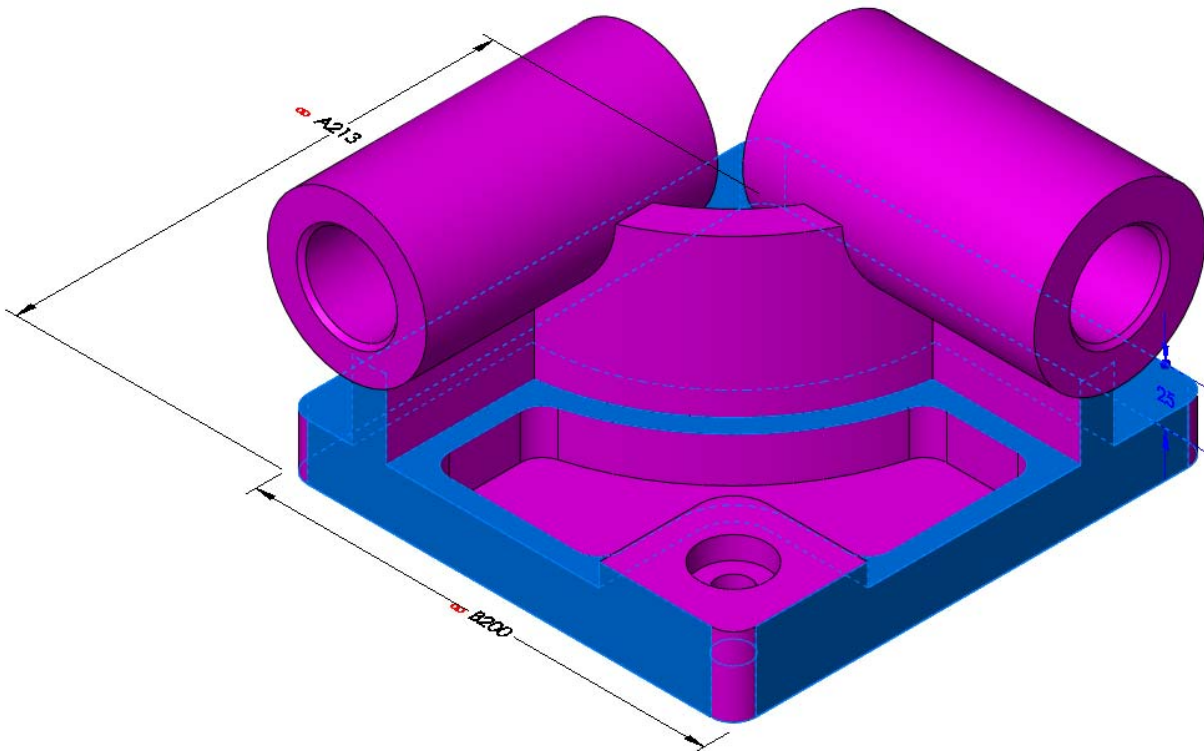
## Answers and Hints

1. d) 14207.34
2. 16490.45
3. 15100.47
4. b) 13206.40
5. 14208.00

**DISCLAIMER: IT IS UP TO YOU TO RESEARCH THESE HINTS. BEING A PROFESSIONAL LEVEL CERTIFIED SOLIDWORKS USER SHOULD ALSO INCLUDE THE ABILITY TO RESEARCH SOLIDWORKS FUNCTIONALITY. CONSULT HELP, YOUR VAR AE'S, THE ON-LINE FORUMS OR BLOGS. NO ANSWERS WILL BE SHARED BY THE CERTIFICATION TEAM!**

Hint #1: Use linked (also known as “shared values”) dimensions to manage the dimensions that are to be the same in each stage. This will ensure that the dimensions that are to be linked together in value stay linked together.

Hint #2: Change the label of the dimensions in your part to A, B, C, D, etc. to visually keep track of which dimensions need to be changed.



Hint #3: As an alternative to Hint #2, you can also use the Design Table to manage the changing parameters.