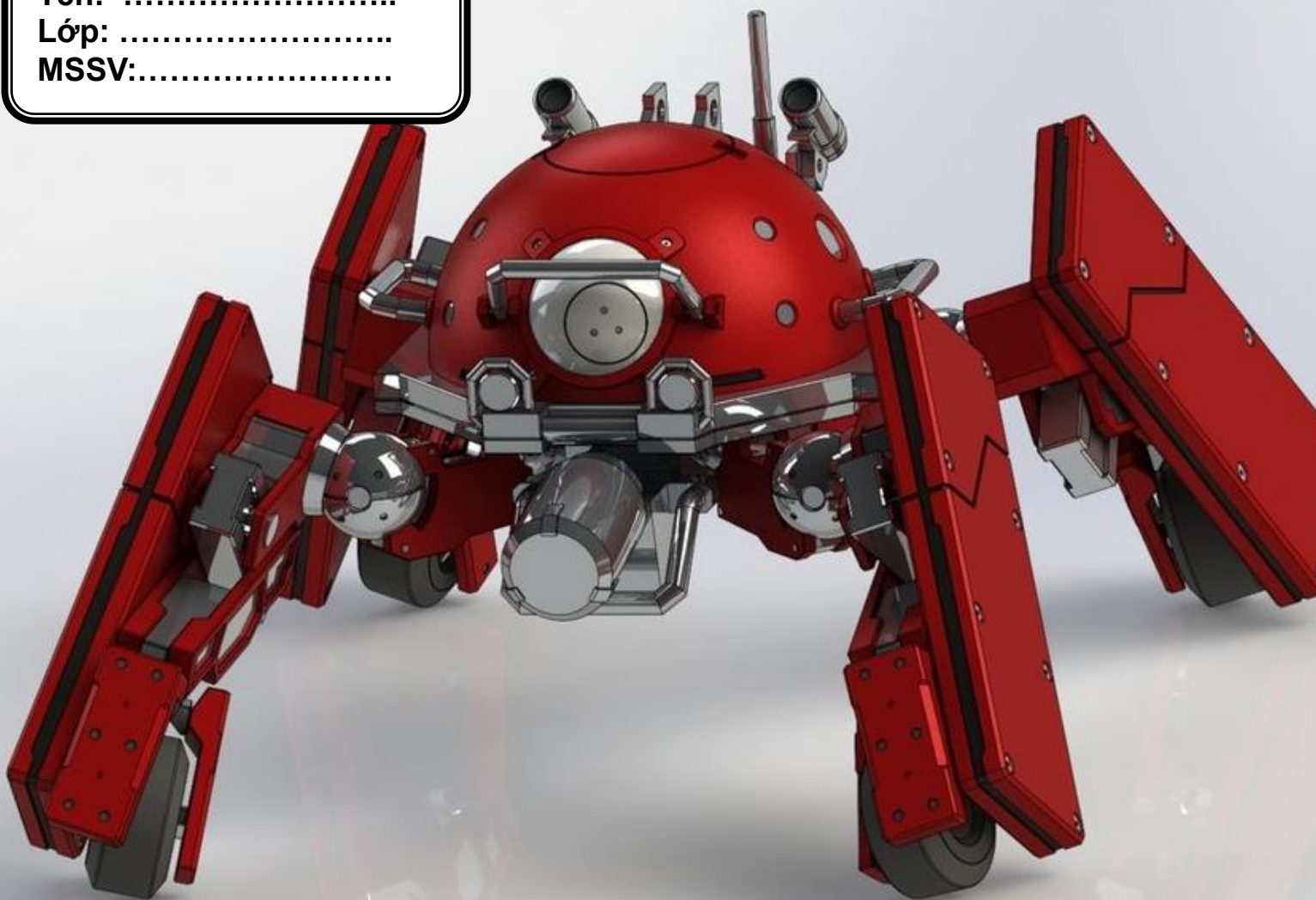


BỘ GIÁO DỤC VÀ ĐÀO TẠO
TRƯỜNG ĐẠI HỌC PHAN THIẾT

BÀI TẬP THỰC HÀNH SOLIDWORKS

Tên:
Lớp:
MSSV:.....

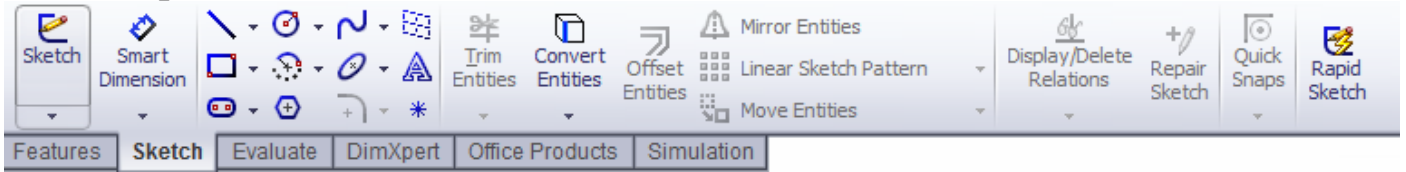


CHƯƠNG 1: SKETCHING

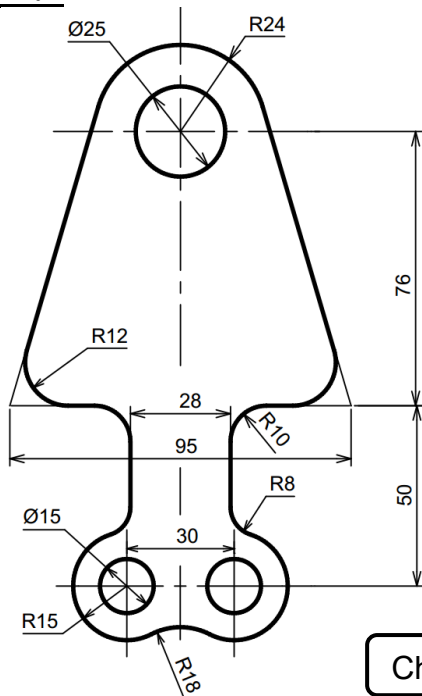
Anh (chị) hãy dùng môi trường SKETCH để vẽ các bản vẽ phác sau:

Unit system: MMGS (millimeter, gram, second)

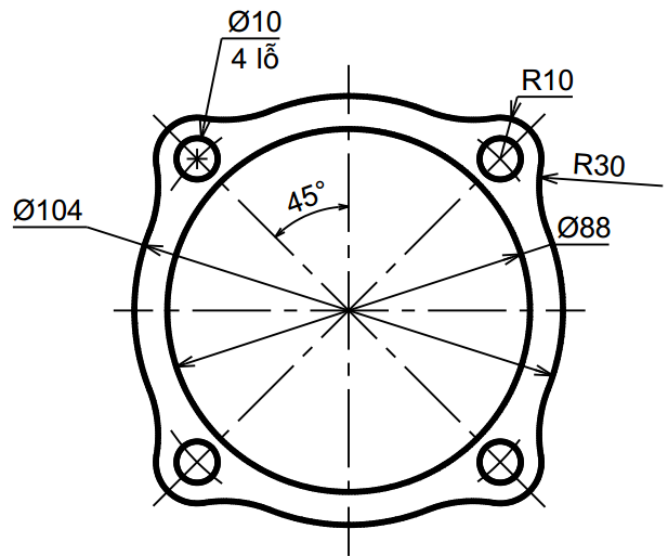
Decimal places: 2



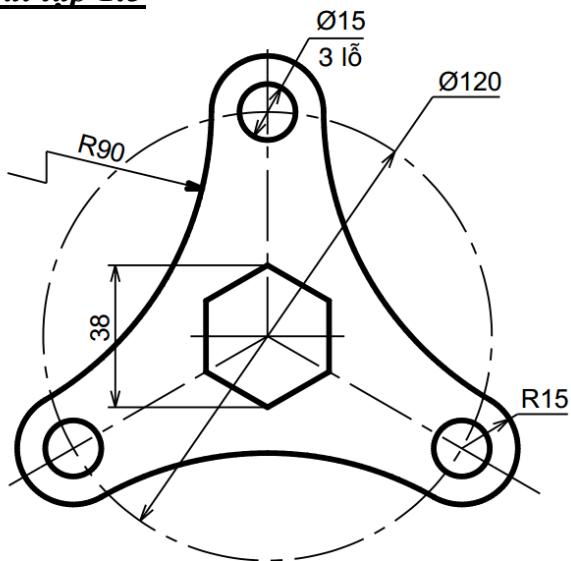
Bài tập 1.1



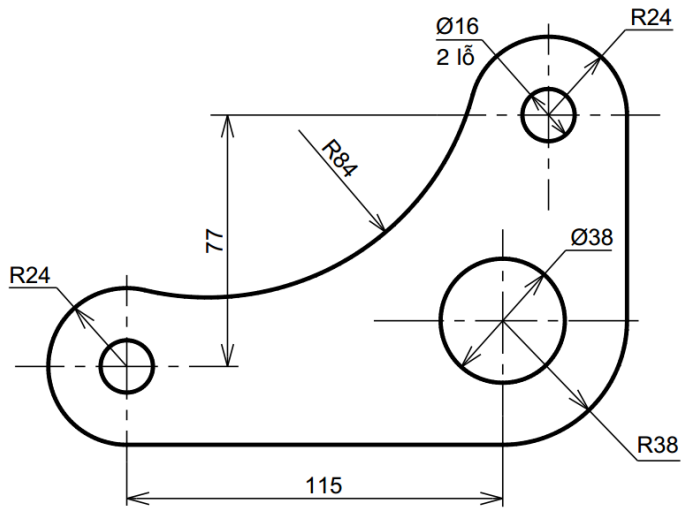
Bài tập 1.2



Bài tập 1.3



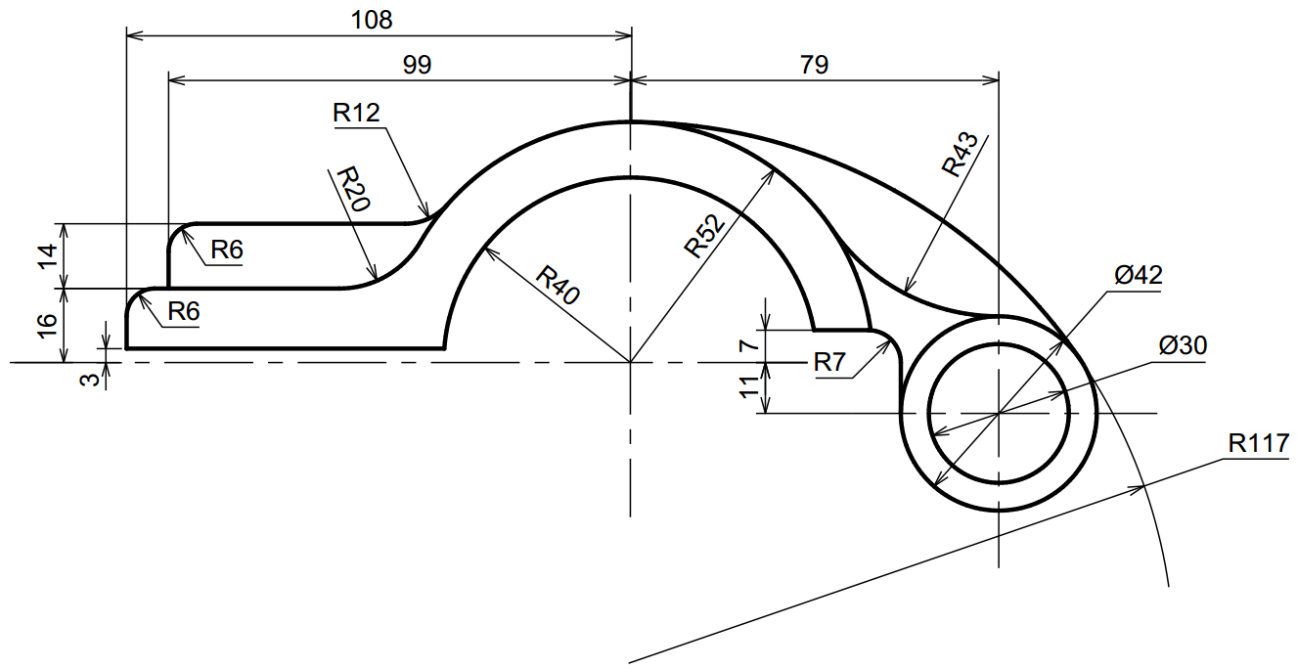
Bài tập 1.4



CHƯƠNG 1: SKETCHER

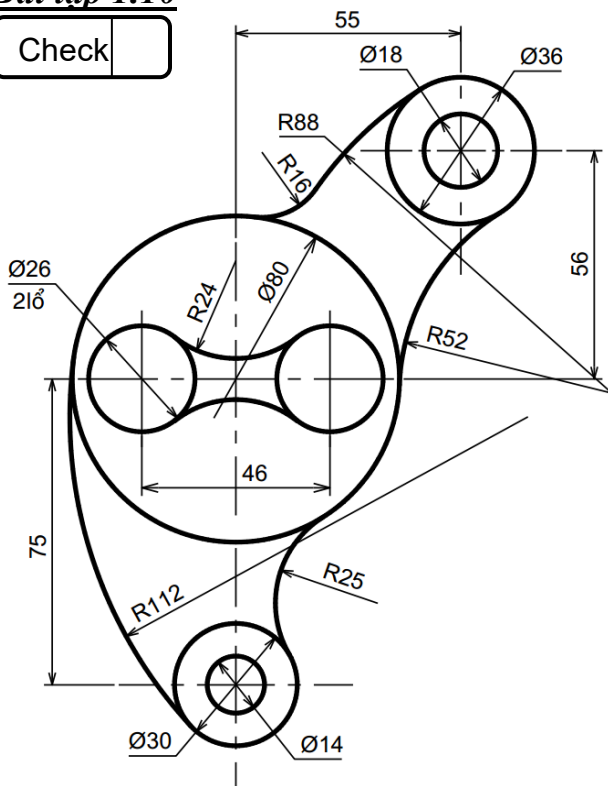
Bài tập 1.9

Check



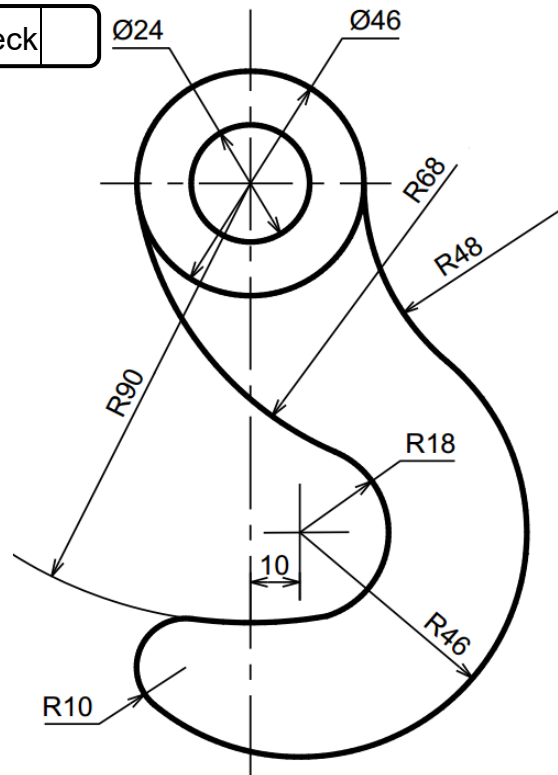
Bài tập 1.10

Check



Bài tập 1.11

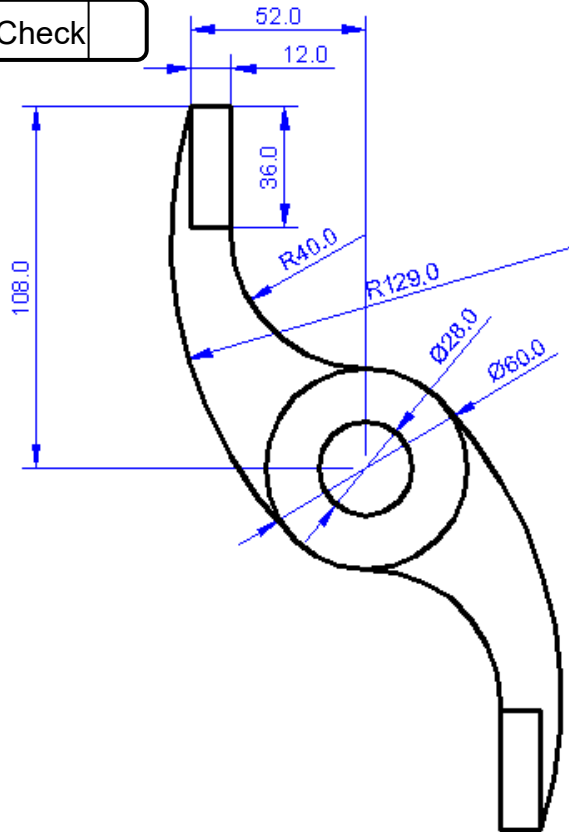
Check



CHƯƠNG 1: SKETCHER

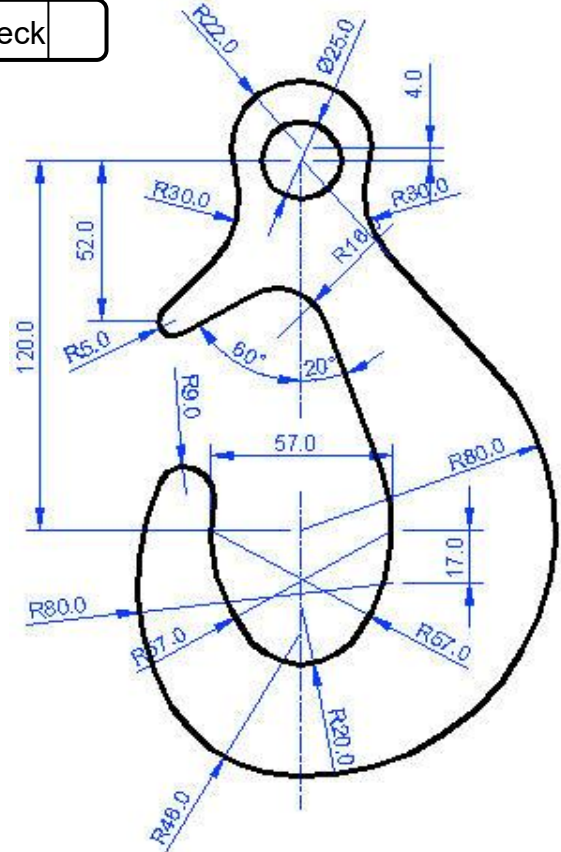
Bài tập 1.12

Check



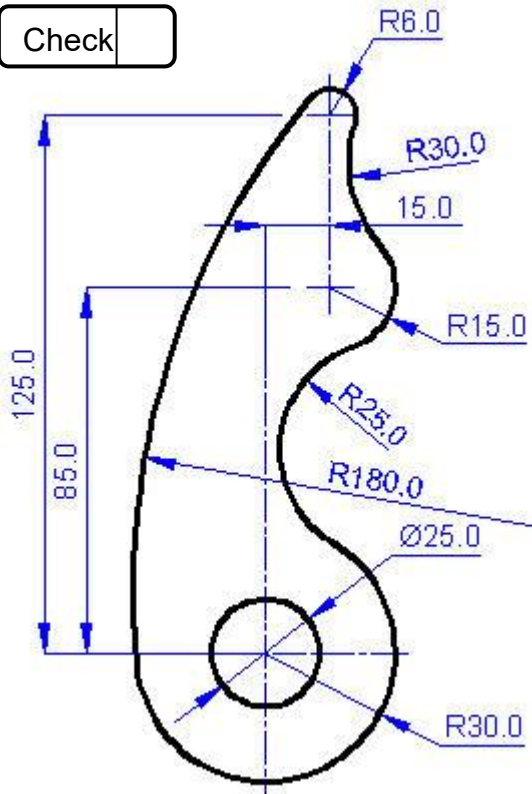
Bài tập 1.13

Check



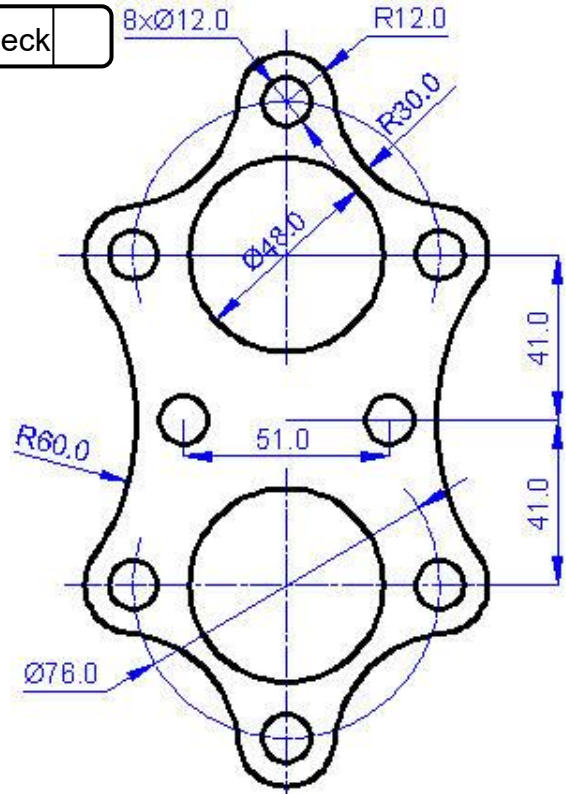
Bài tập 1.14

Check



Bài tập 1.15

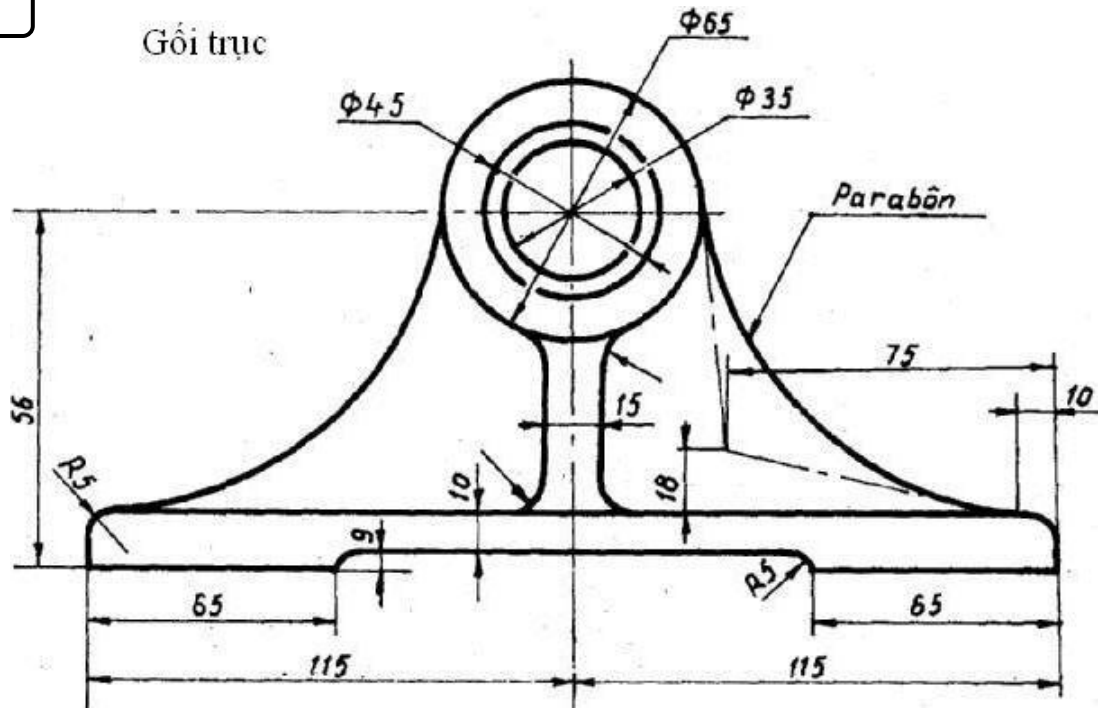
Check



CHƯƠNG 1: SKETCHER

Bài tập 1.16

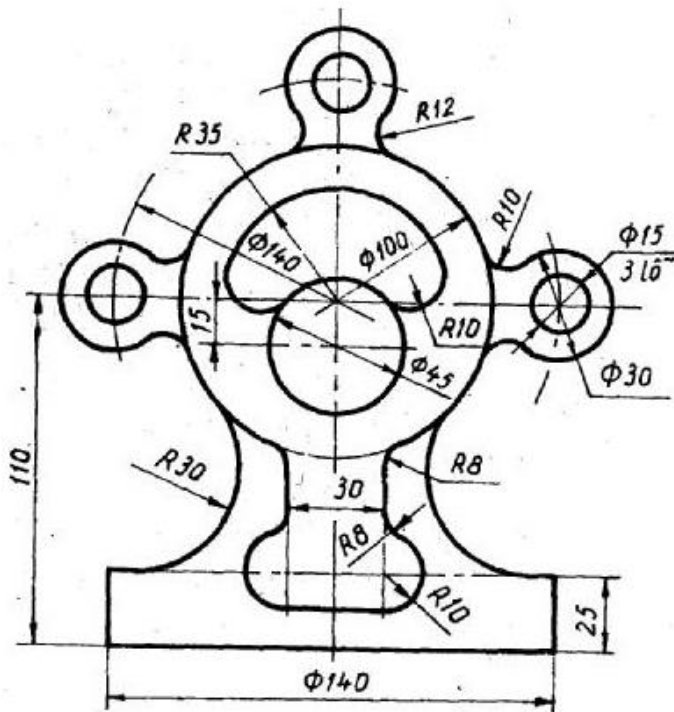
Check



Bài tập 1.17

Check

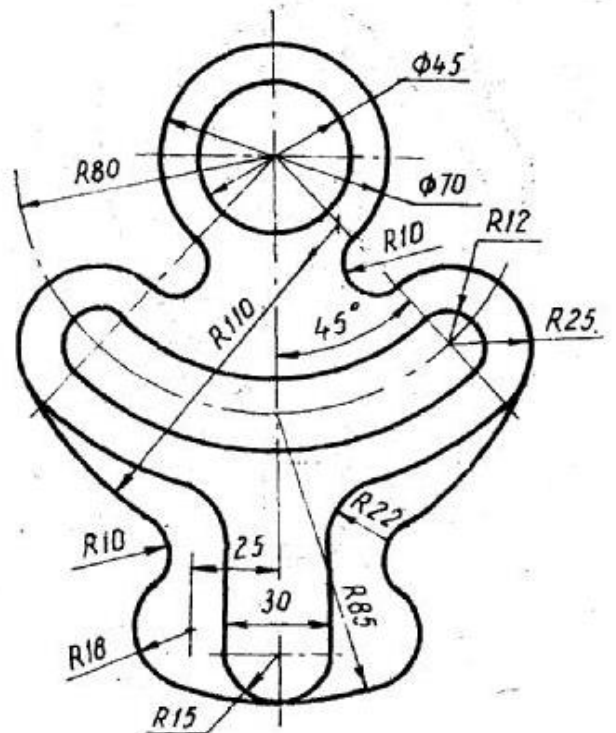
GIÁ ĐỠ



Bài tập 1. 18

Check

CÁI CHẠC



CHƯƠNG 2: PART

Anh (chị) hãy dùng tính năng (Features) để vẽ các chi tiết với yêu cầu sau:

Unit system: MMGS (millimeter, gram, second)

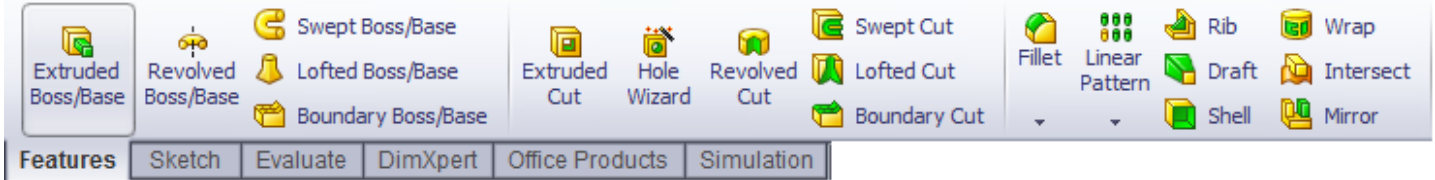
Decimal places: 2

Part origin: Arbitrary

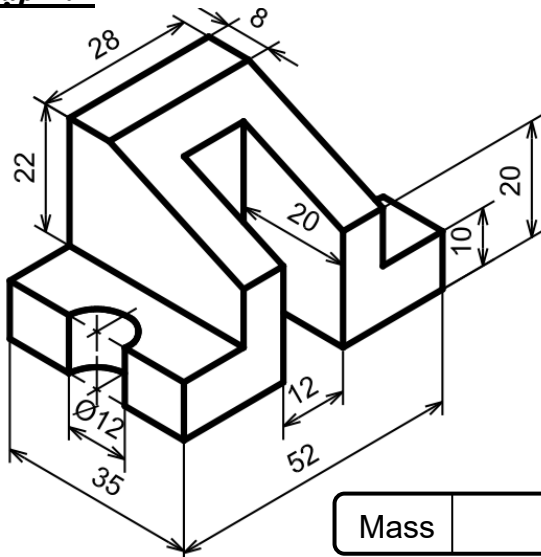
Material: AISI 1020 Steel

Density = 0.0079 g/mm³

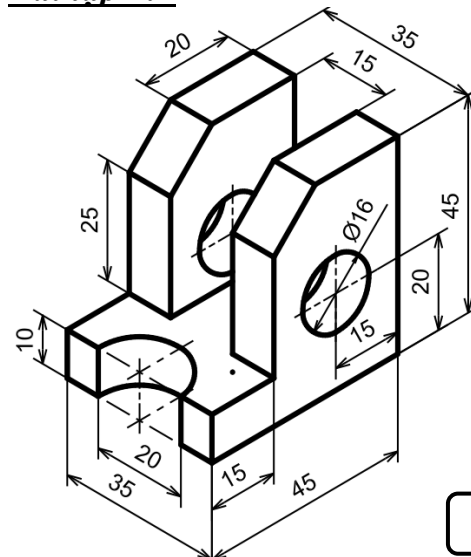
a) Hãy tính khối lượng của từng chi tiết?



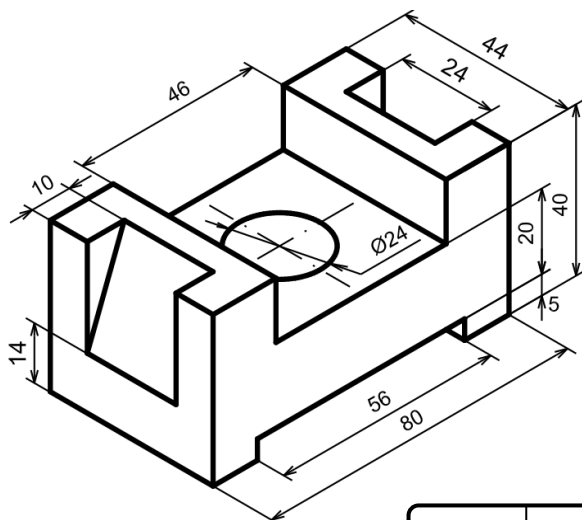
Bài tập 2.1



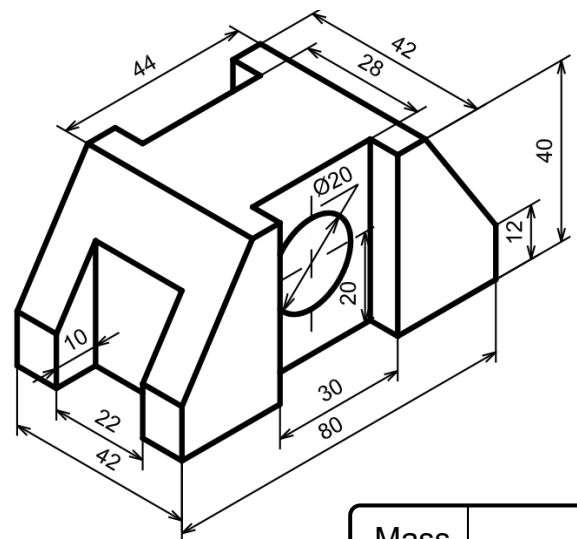
Bài tập 2.2



Bài tập 2.3

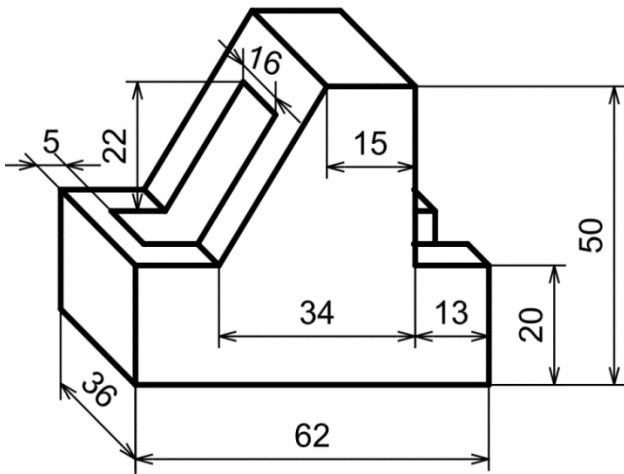


Bài tập 2.4

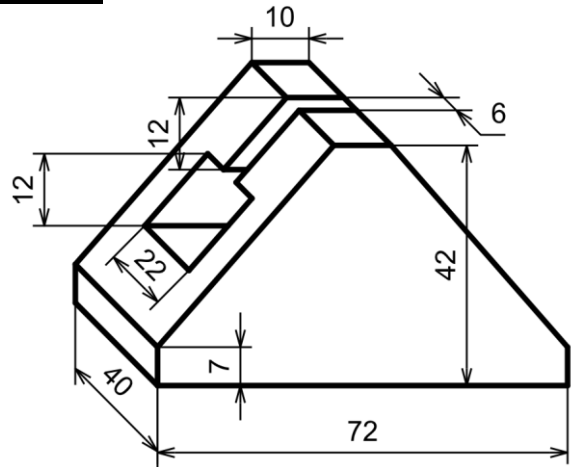


CHƯƠNG 2: PART

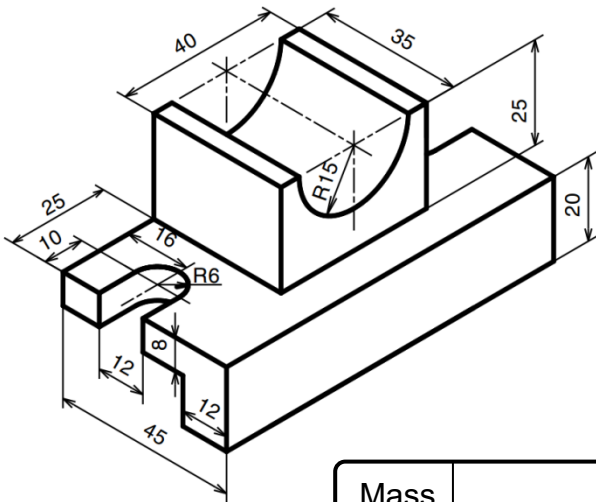
Bài tập 2.5



Bài tập 2.6

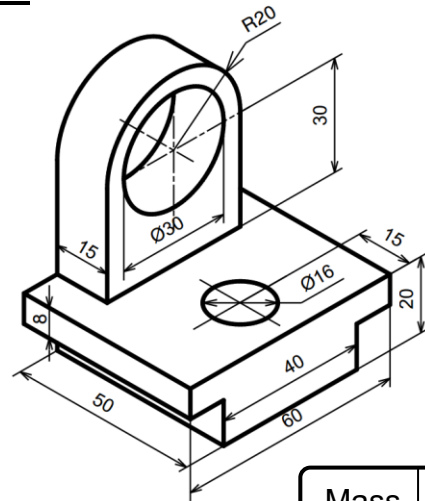


Bài tập 2.7



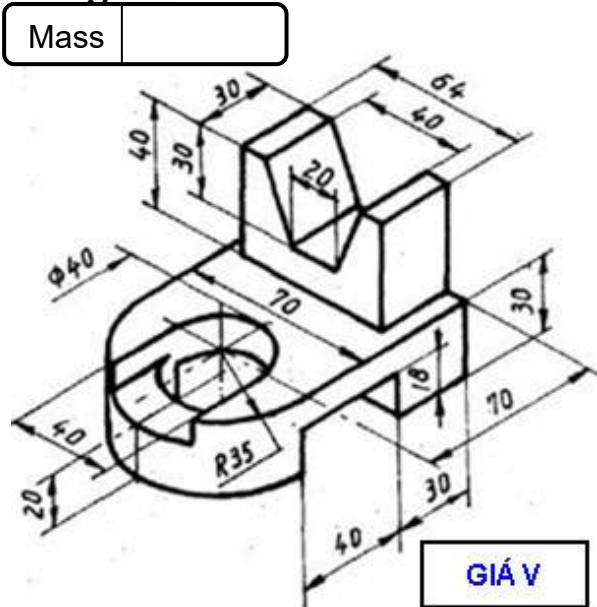
Mass

Bài tập 2.8



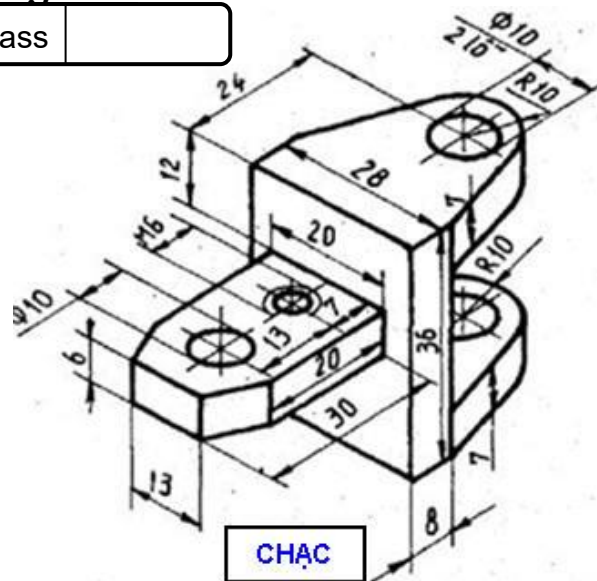
Mass

Bài tập 2.9



GIÁ V

Bài tập 2.10

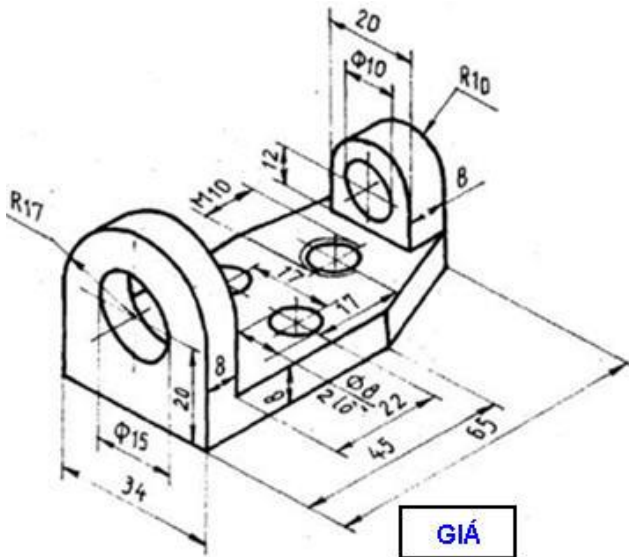


CHẠC

CHƯƠNG 2: PART

Bài tập 2.11

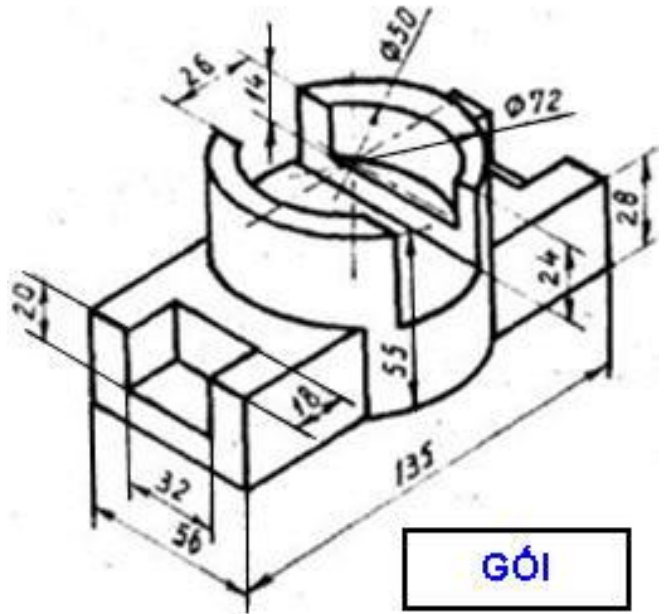
Mass



GIÁ

Bài tập 2.12

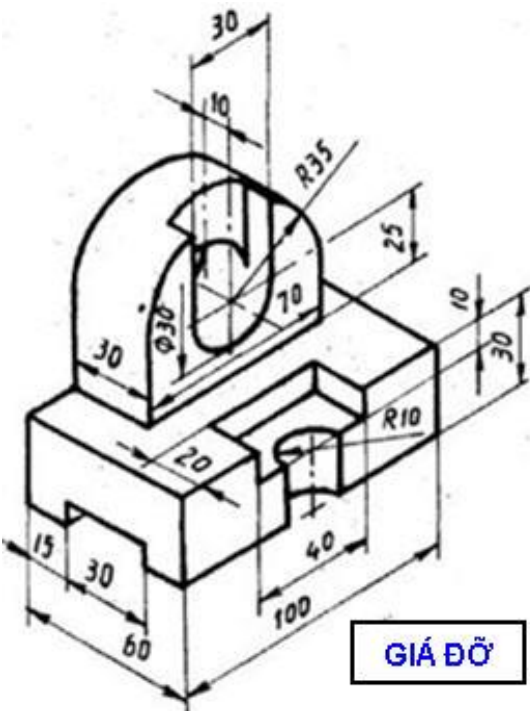
Mass



GÓI

Bài tập 2.13

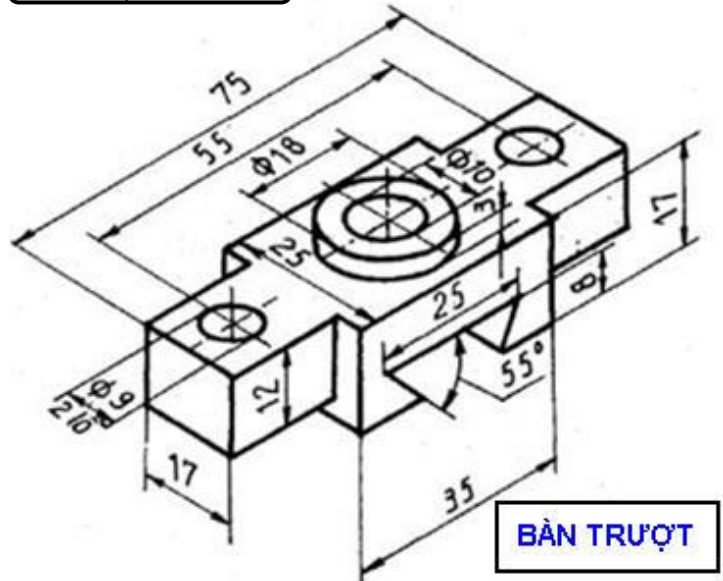
Mass



GIÁ ĐỖ

Bài tập 2.14

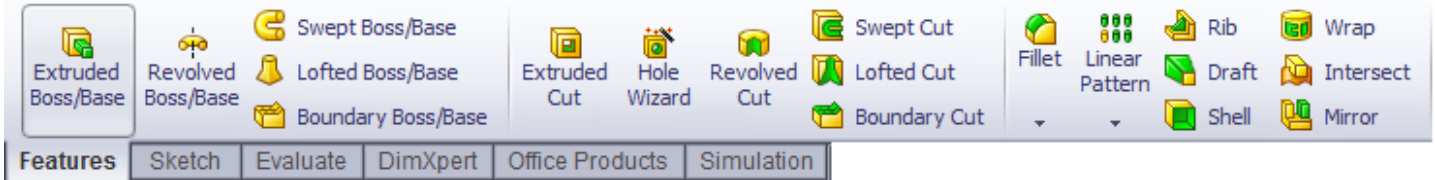
Mass



BÀN TRƯỢT

CHƯƠNG 3: ASSEMBLY

Step1: Anh (chị) hãy dùng tính năng (Features) để vẽ các chi tiết với yêu cầu sau:



Unit system: MMGS (millimeter, gram, second)

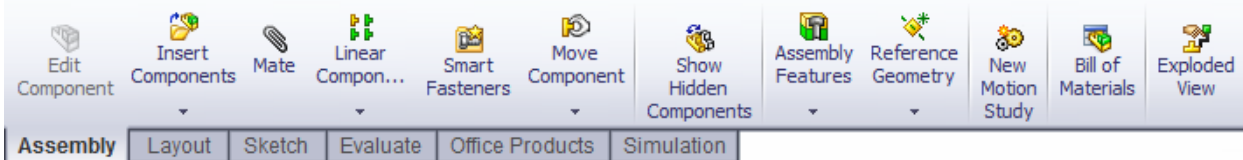
Decimal places: 2

Part origin: Arbitrary

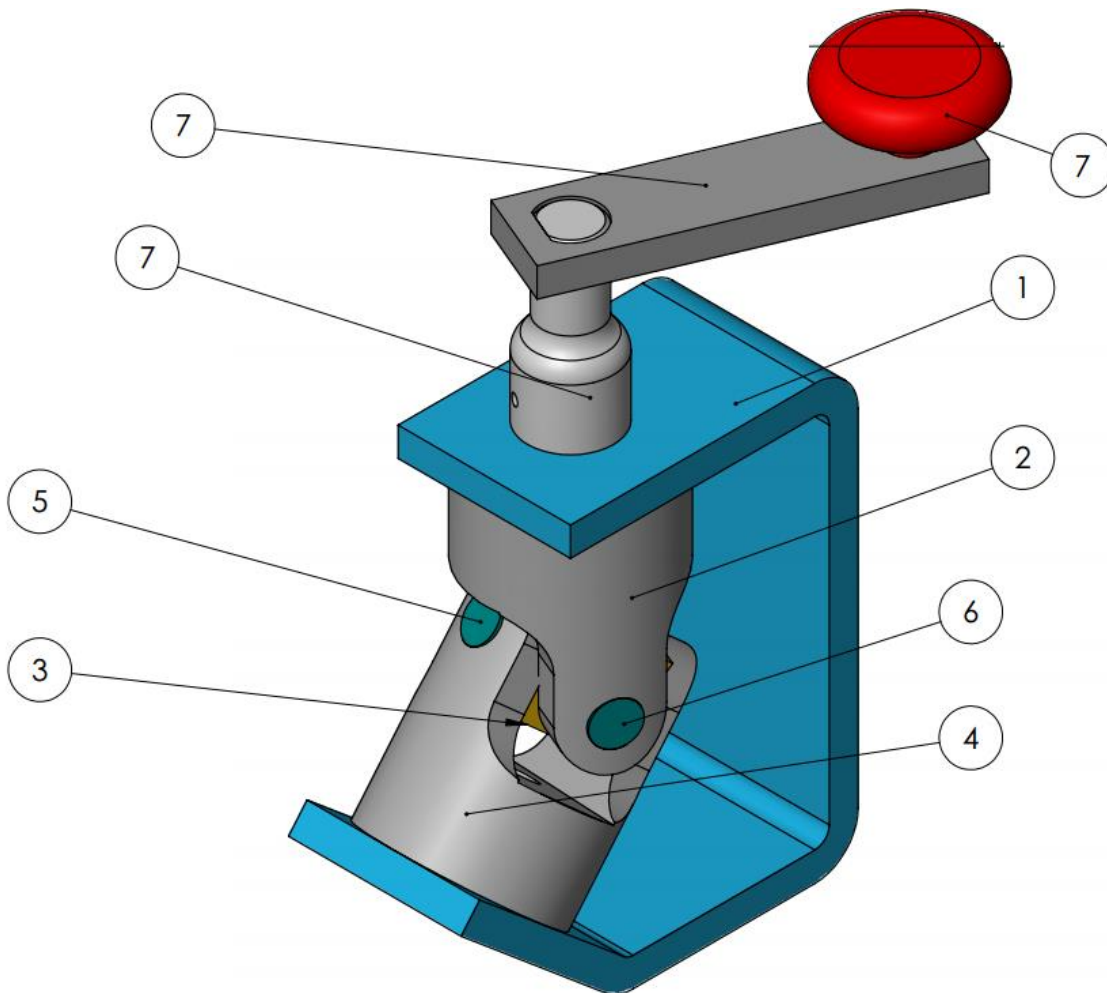
Material: AISI 1020 Steel

Density = 0.0079 g/mm³

Step2: Hãy lắp ghép các chi tiết sau trong môi trường Assembly ?

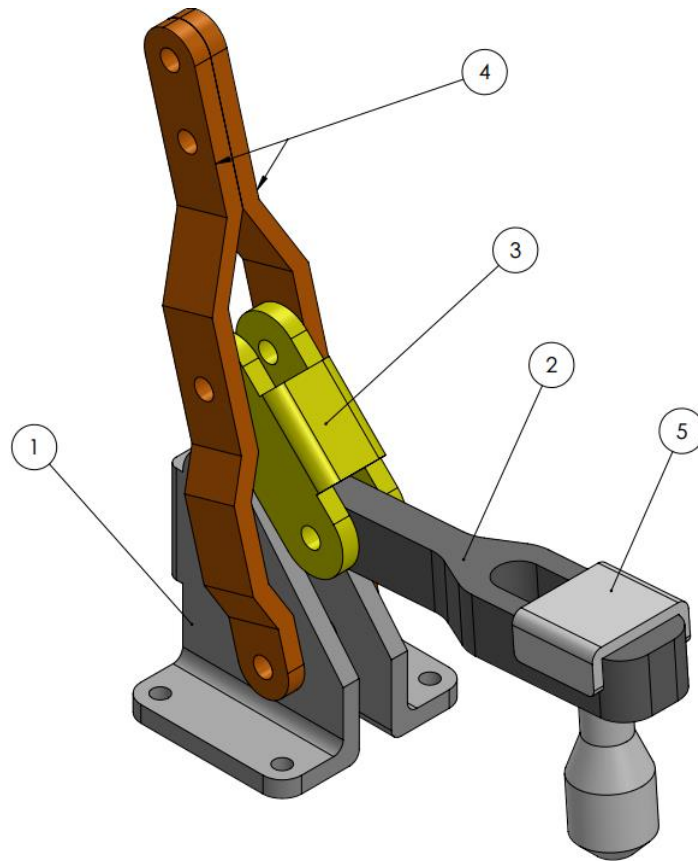


Bài tập 3.1

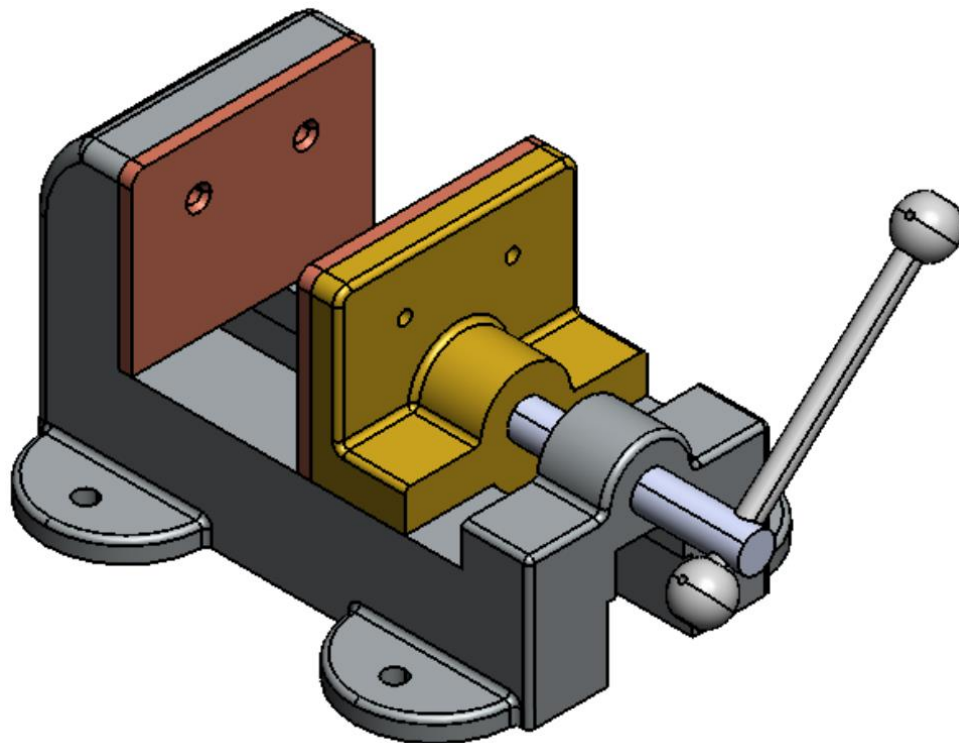


CHƯƠNG 3: ASSEMBLY

Bài tập 3,2

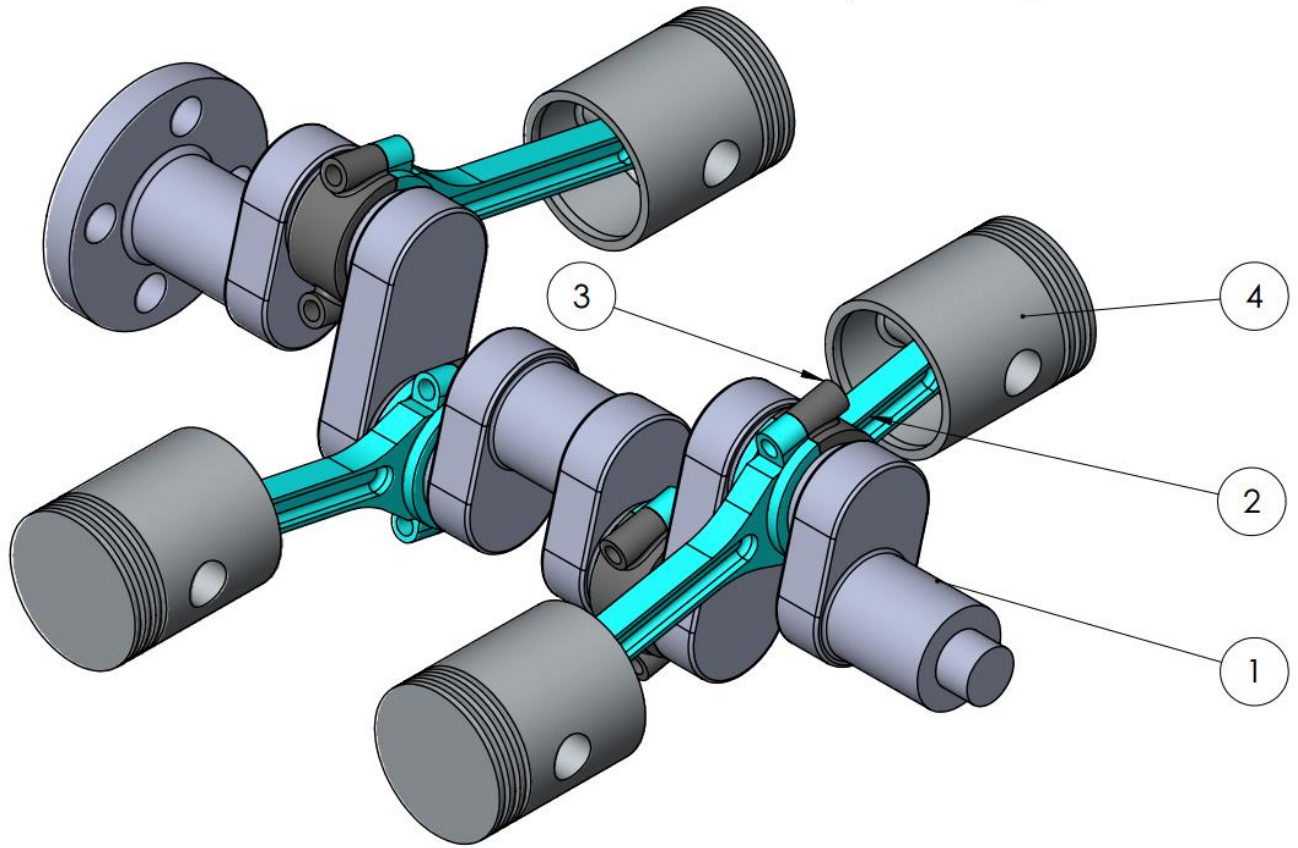


Bài tập 3.3



CHƯƠNG 3: ASSEMBLY

Bài tập 3,4

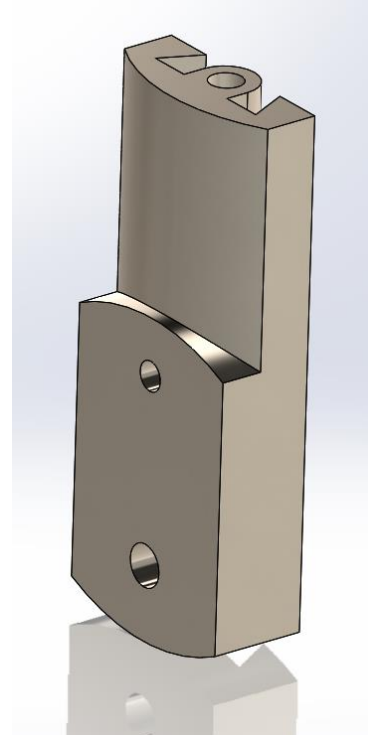


Bài tập Drawing Final Boss

BẠN A



BẠN B



Chia nhóm mỗi nhóm 2 bạn. Mỗi bạn tự xuất bản vẽ của mình sau đó xuất ra file PDF gửi cho bạn trong nhóm. (trao đổi bản vẽ cho nhau). Từ bản vẽ của bạn, dựng lên file PART → nếu dựng được thì cộng điểm.

CHƯƠNG 4: ADVANCED PART+DRAWING

Anh (chị) hãy dùng tính năng (Features) để vẽ các chi tiết với yêu cầu sau:

Unit system: MMGS (millimeter, gram, second)

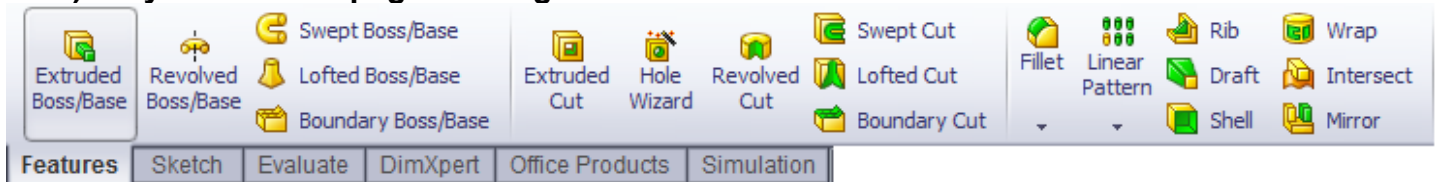
Decimal places: 2

Part origin: Arbitrary

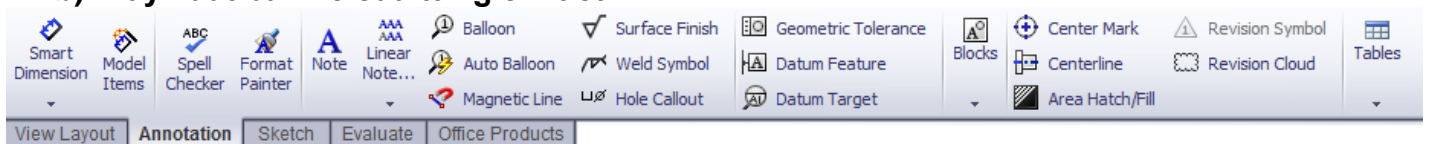
Material: AISI 1020 Steel

Density = 0.0079 g/mm³

a) Hãy tính khối lượng của từng chi tiết?

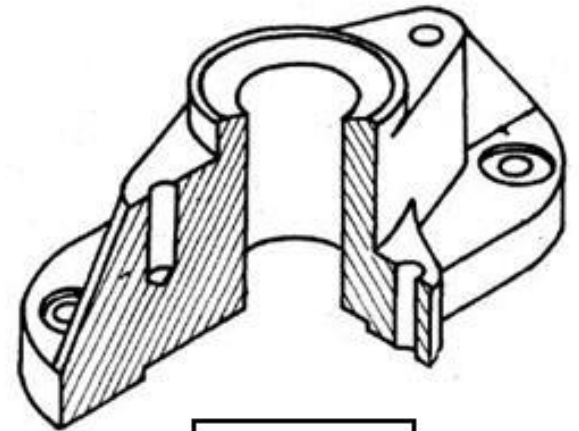
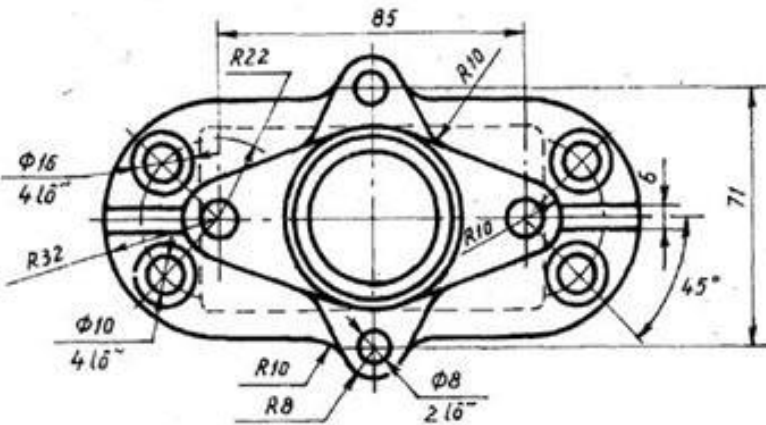
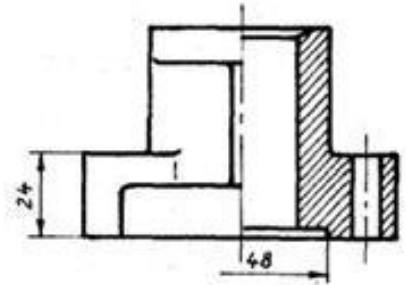
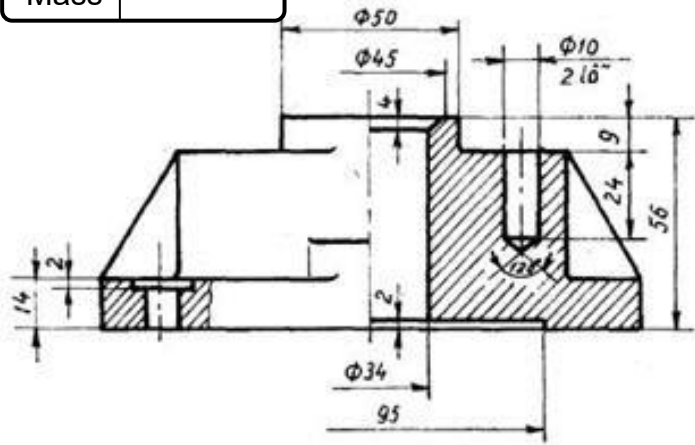


b) Hãy xuất bản vẽ của từng chi tiết ?



Bài tập 4.1

Mass

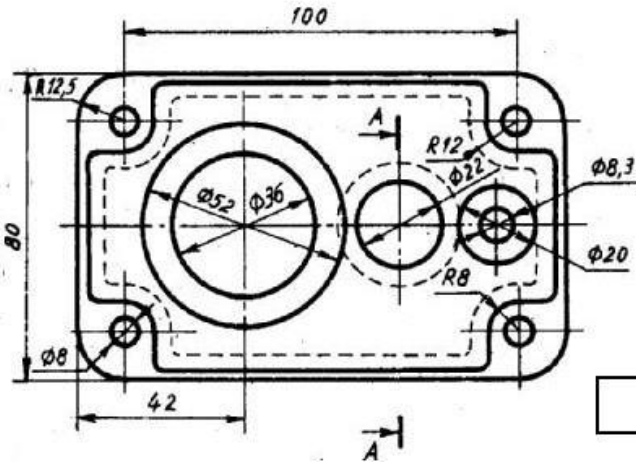
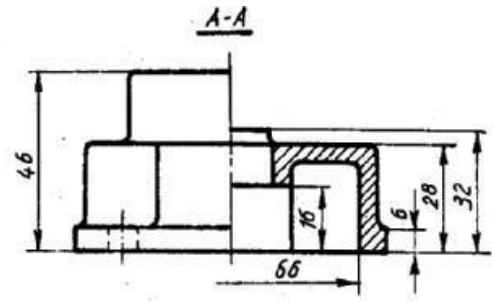
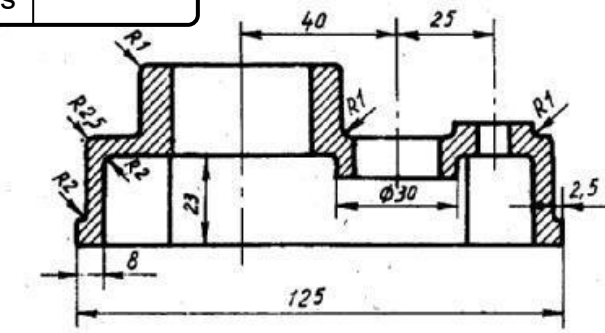


Ó ĐỒ

CHƯƠNG 4: ADVANCED PART+DRAWING

Bài tập 4.2

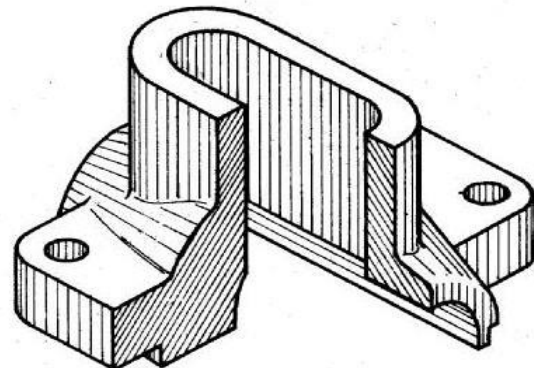
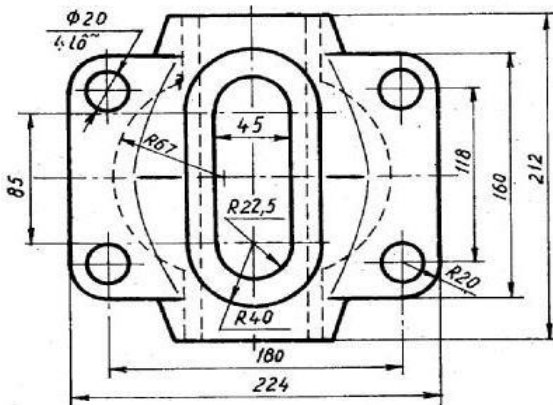
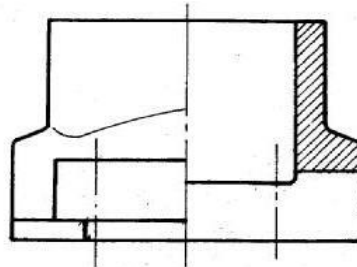
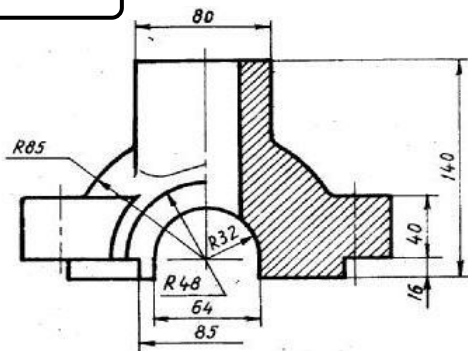
Mass



NÁP

Bài tập 4.3

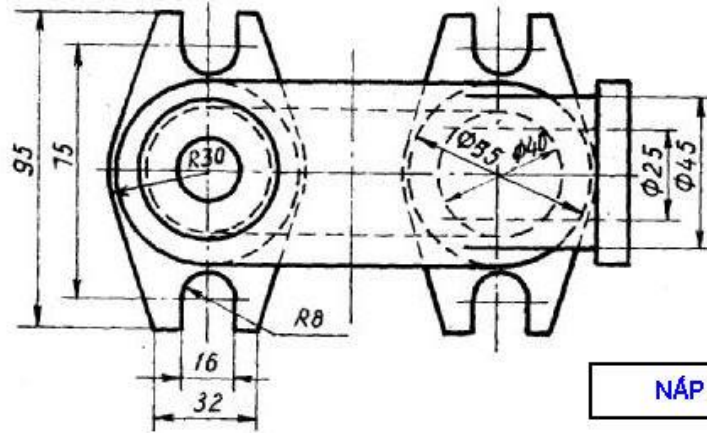
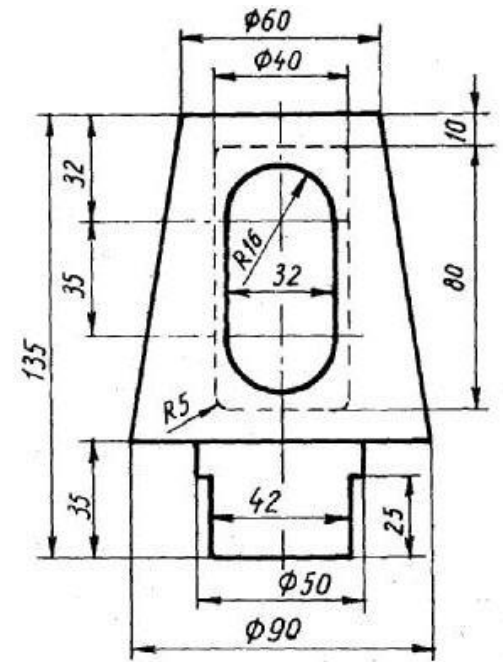
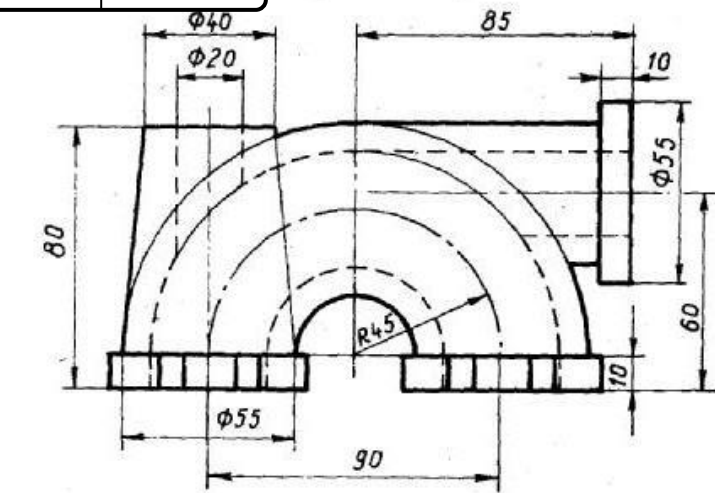
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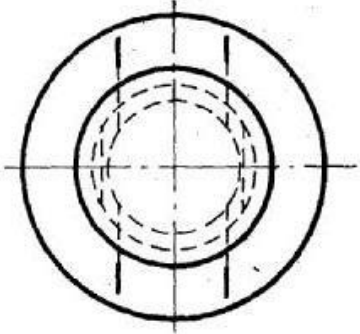
GÓI ĐỖ

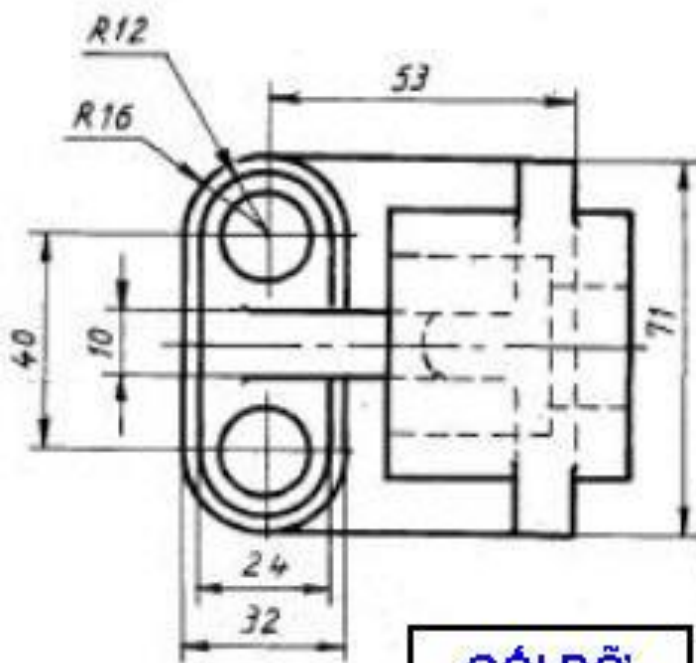
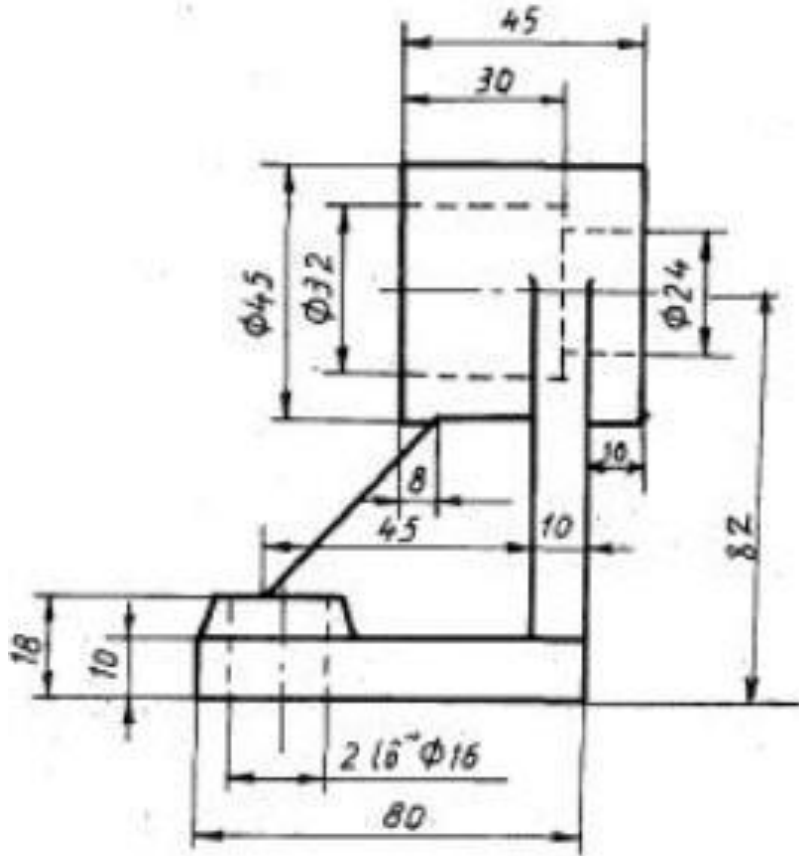
Bài tập 4,4

Mass



NÁP TRỤC VAM



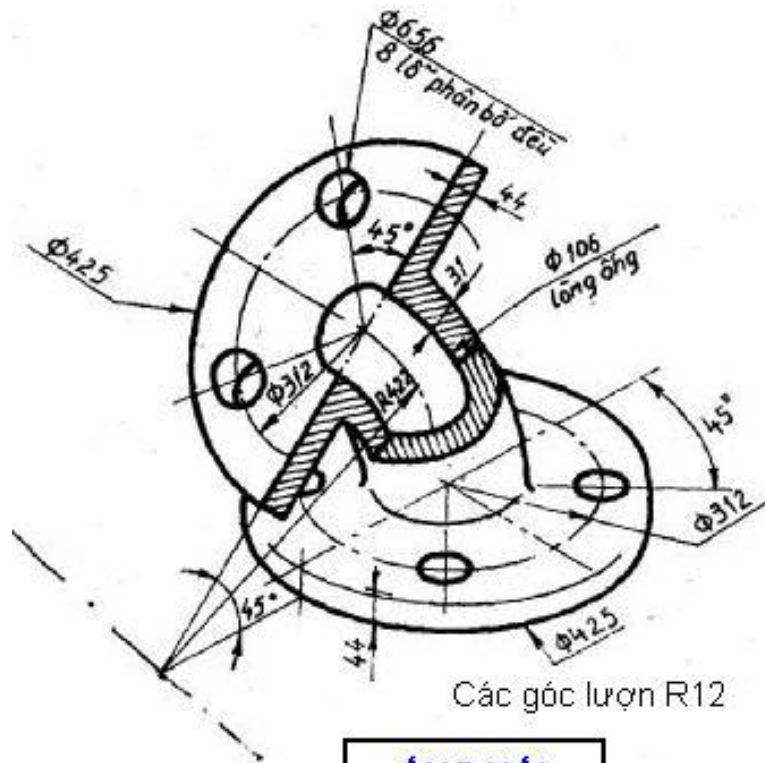


GÓI ĐỒ



Bài tập 4.6

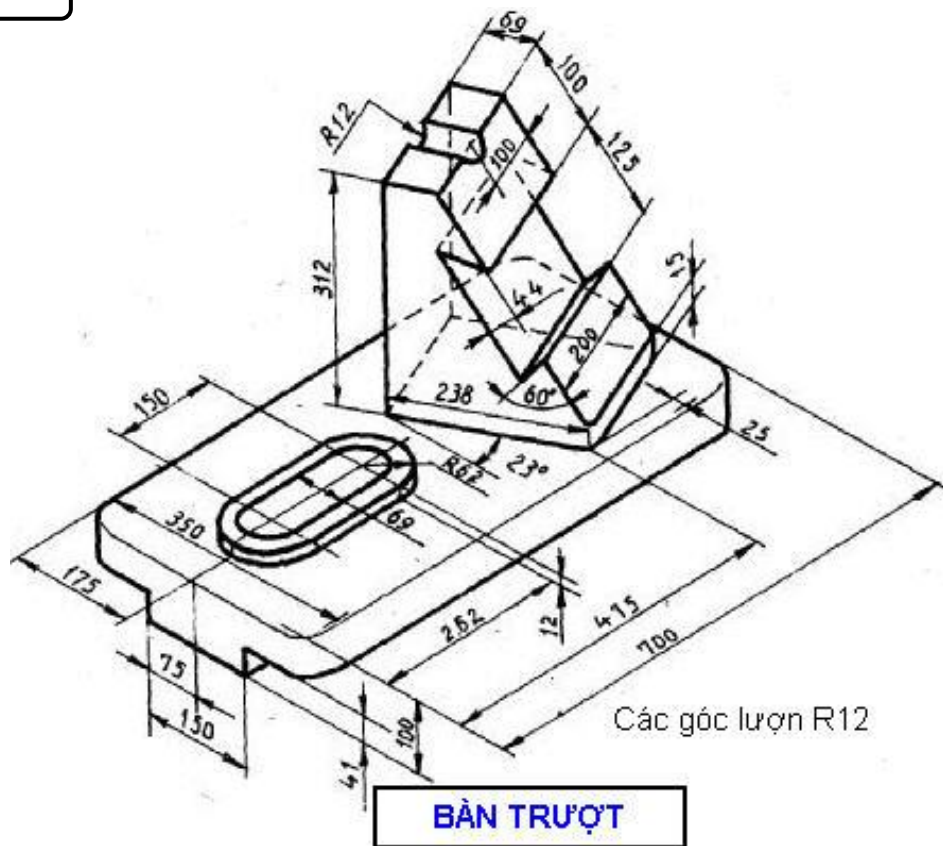
Mass



ỐNG NỐI

Bài tập 4.7

Mass

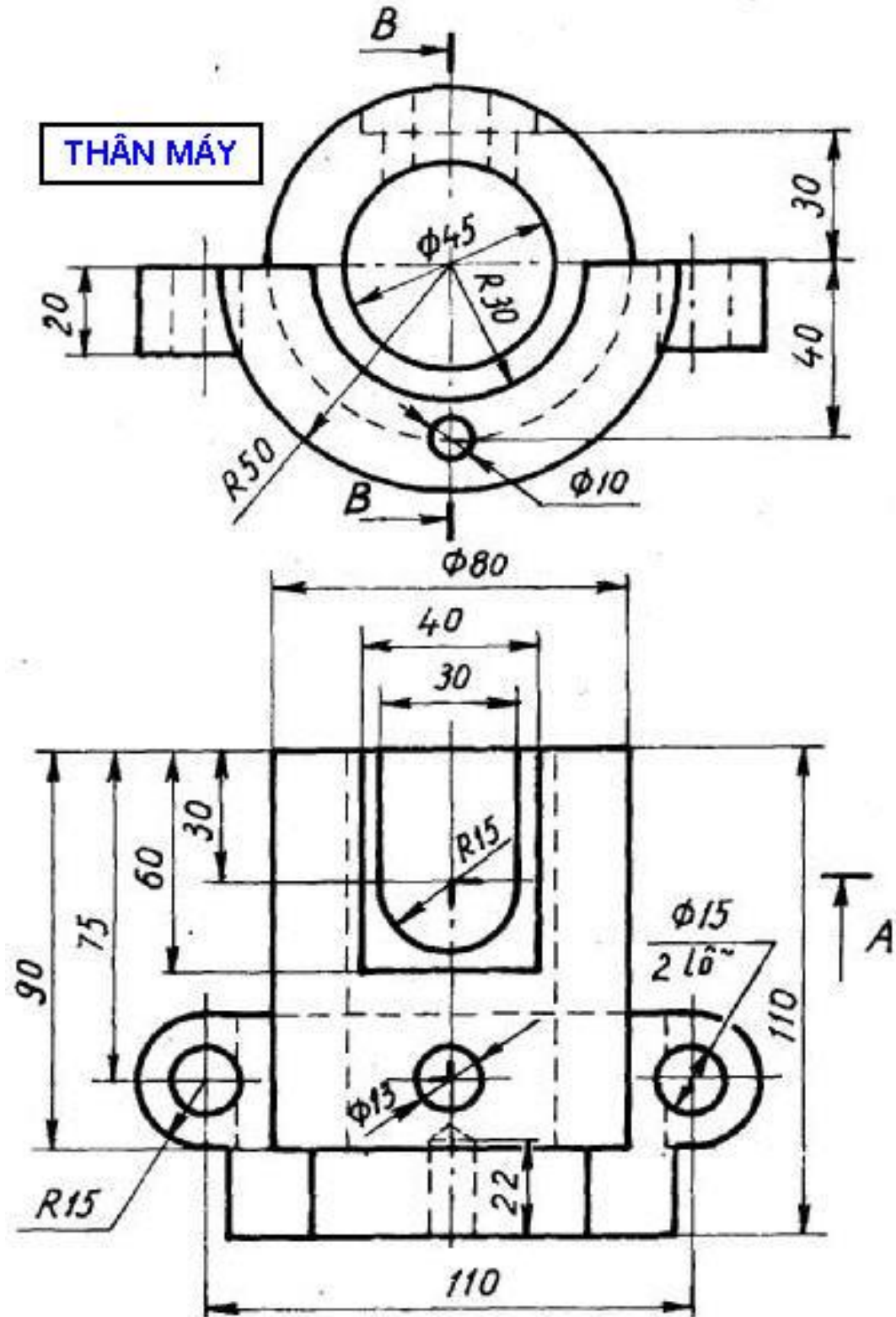


BÀN TRƯỢT

CHƯƠNG 4: ADVANCED PART+DRAWING

Bài tập 4.8

Mass

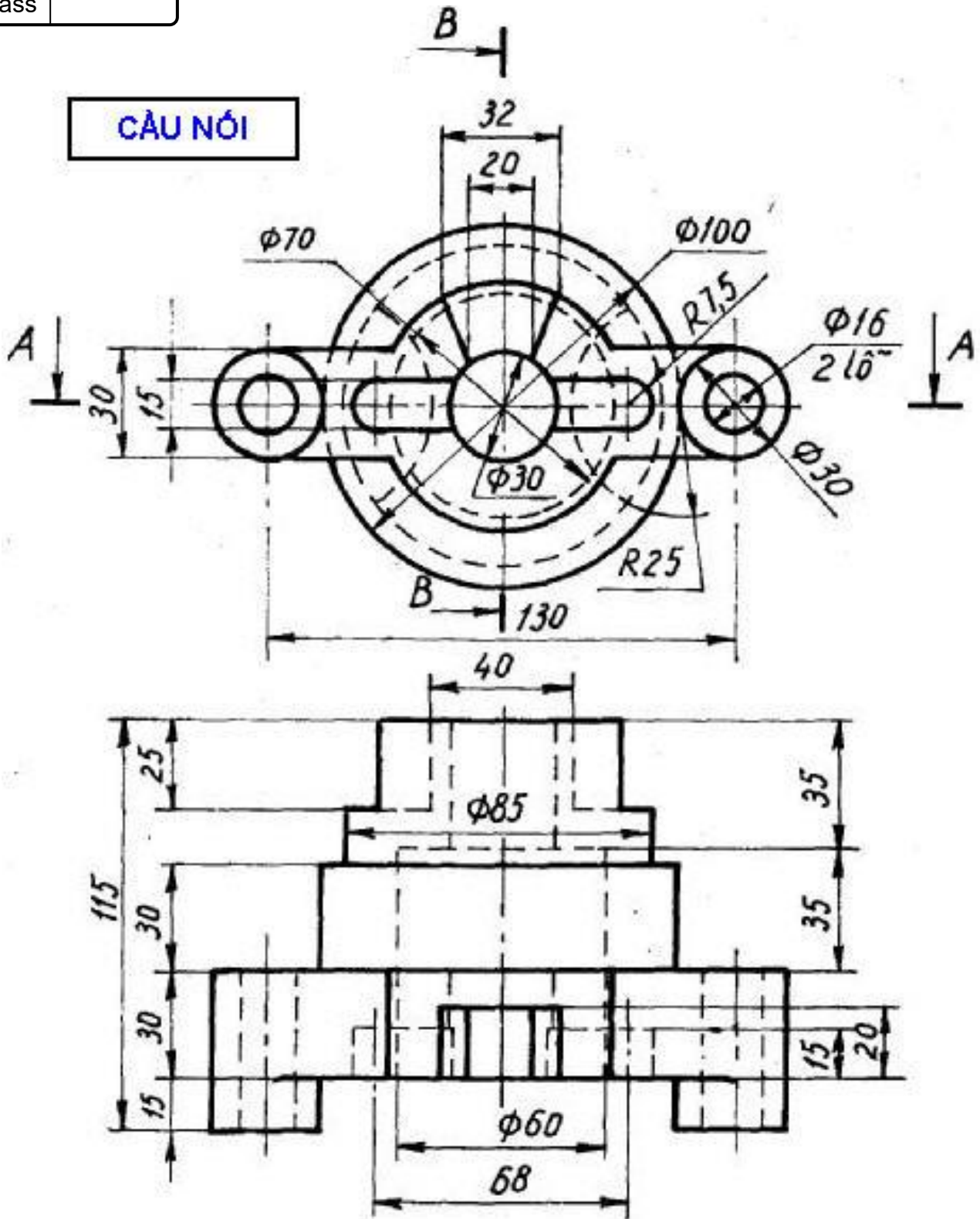


CHƯƠNG 4: ADVANCED PART+DRAWING

Bài tập 4.9

Mass

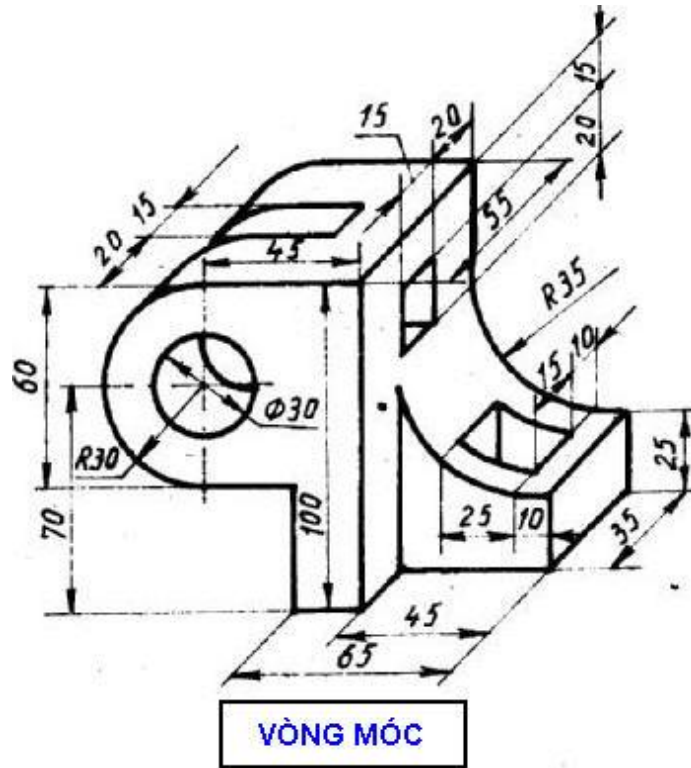
CẦU NÓI



CHƯƠNG 4: ADVANCED PART+DRAWING

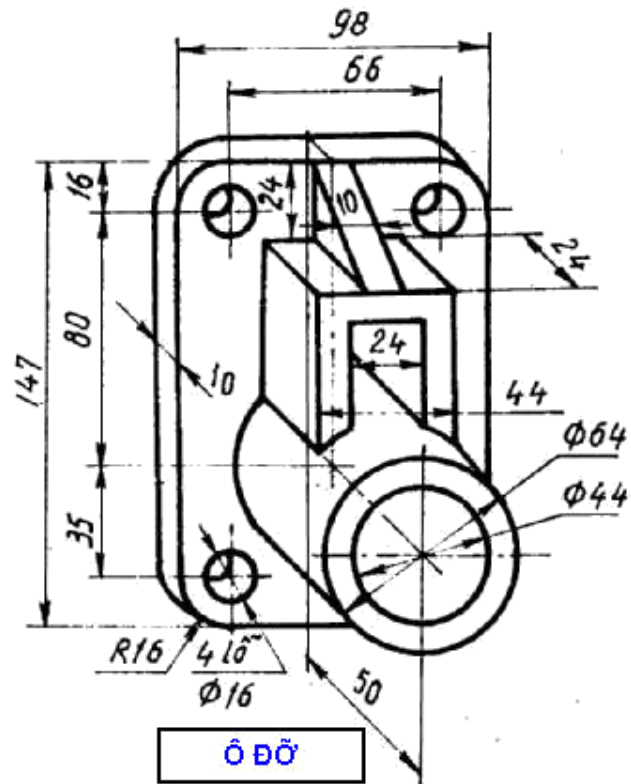
Bài tập 4.10

Mass



Bài tập 4.11

Mass



SolidWorks Corporation: CSWA Sample Exam

Certified SolidWorks Associate (CSWA)

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 CSWA exam.

These questions are an example of what to expect in the CSWA 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 6 out of the 8 questions correctly in 90 minutes or less then you should be ready to take the real CSWA exam.

What you will need for the real CSWA exam:

1. A computer that is running SolidWorks 2007 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 is the topic and question breakdown of the CSWA exam:

Drafting Competencies (3 Questions of 5 Points Each):

- Miscellaneous questions on drafting functionality

Basic Part Creation and Modification (2 Questions of 15 Points Each):

- Sketching
- Extrude Boss
- Extrude Cut
- Modification of Key Dimensions

Intermediate Part Creation and Modification (2 Questions of 15 Points Each):

- Sketching
- Revolve Boss
- Extrude Cut
- Circular Pattern

Advanced Part Creation and Modification (3 Questions of 15 Points Each):

- Sketching
- Sketch Offset
- Extrude Boss
- Extrude Cut
- Modification of Key Dimensions
- More Difficult Geometry Modifications

Assembly Creation (4 Questions of 30 Points Each):

- Placing of Base Part
- Mates
- Modification of Key Parameters in Assembly

Total Questions: 14

Total Points: 240

165 out of 240 points needed to pass the CSWA.

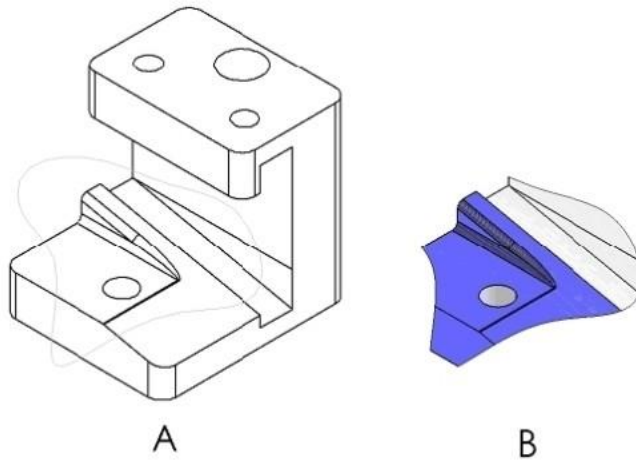
The sample test below will show the basic format of the CSWA exam in three sections:

- Drafting Competencies
- Part Modeling
- Assembly Creation

SAMPLE TEST Drafting

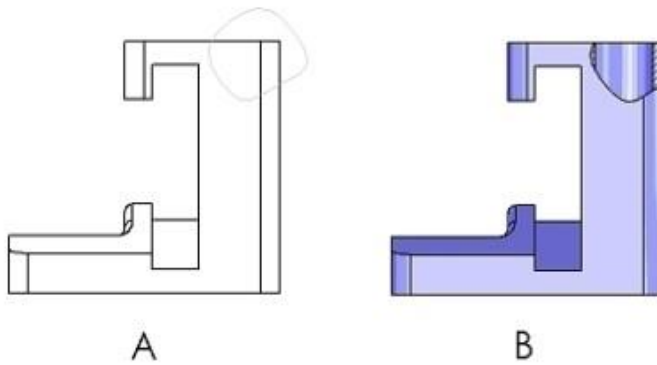
Competencies:

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) Detail

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

26. Part (Tool Block) - Step 1

Build this part in SolidWorks.

(Save part after each question in a different file in case it must be reviewed)

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

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

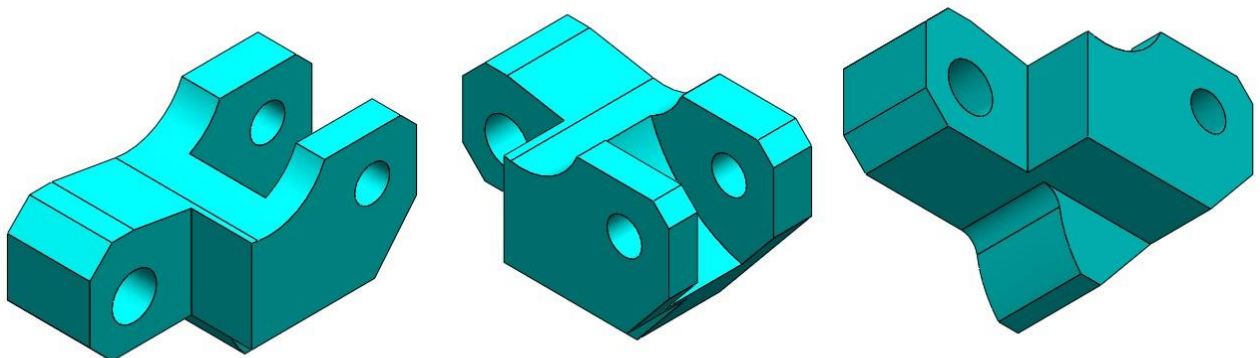
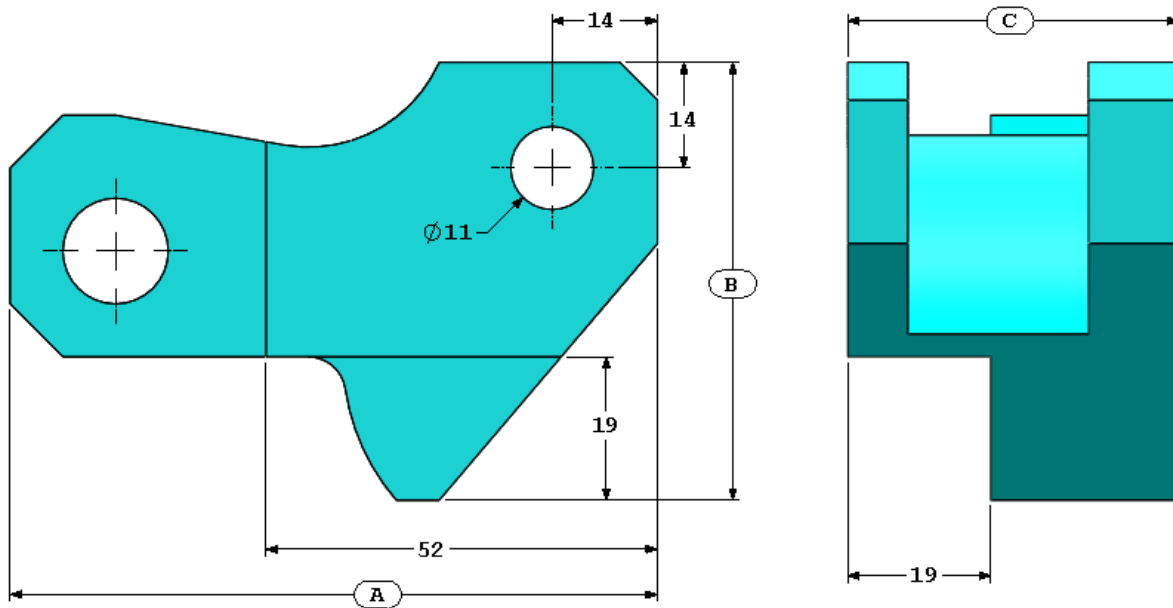
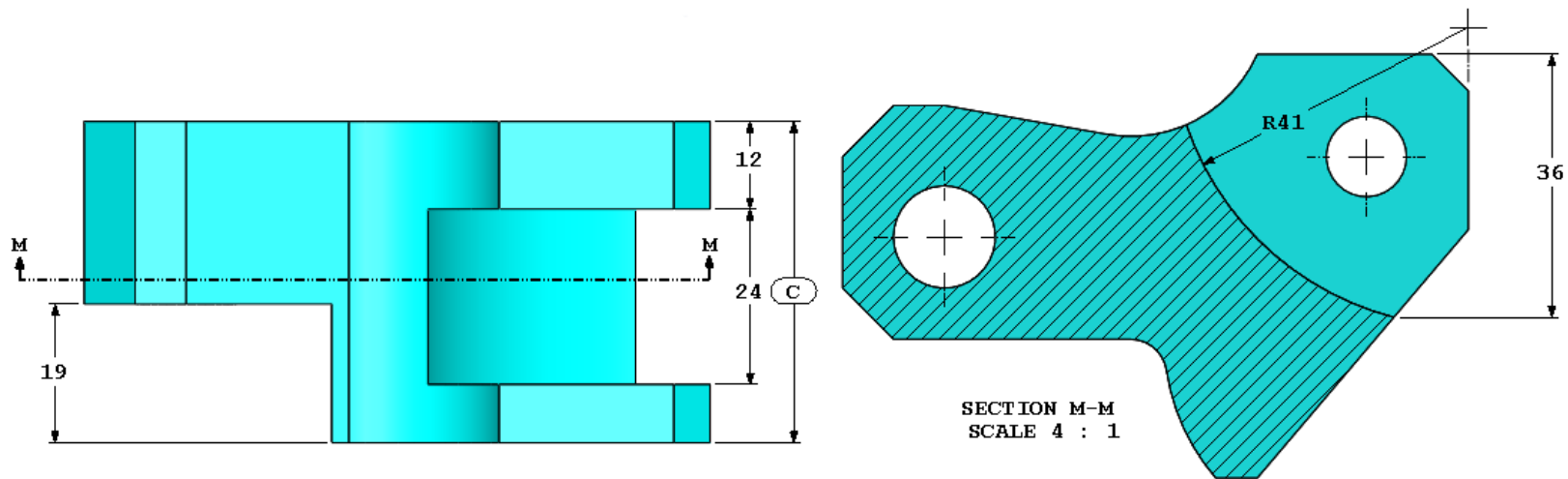
B = 59.00

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: (These images are to be used to answer Question #5)



5. Part (Tool Block) - Step 3

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 removing material and also by changing the following parameters:

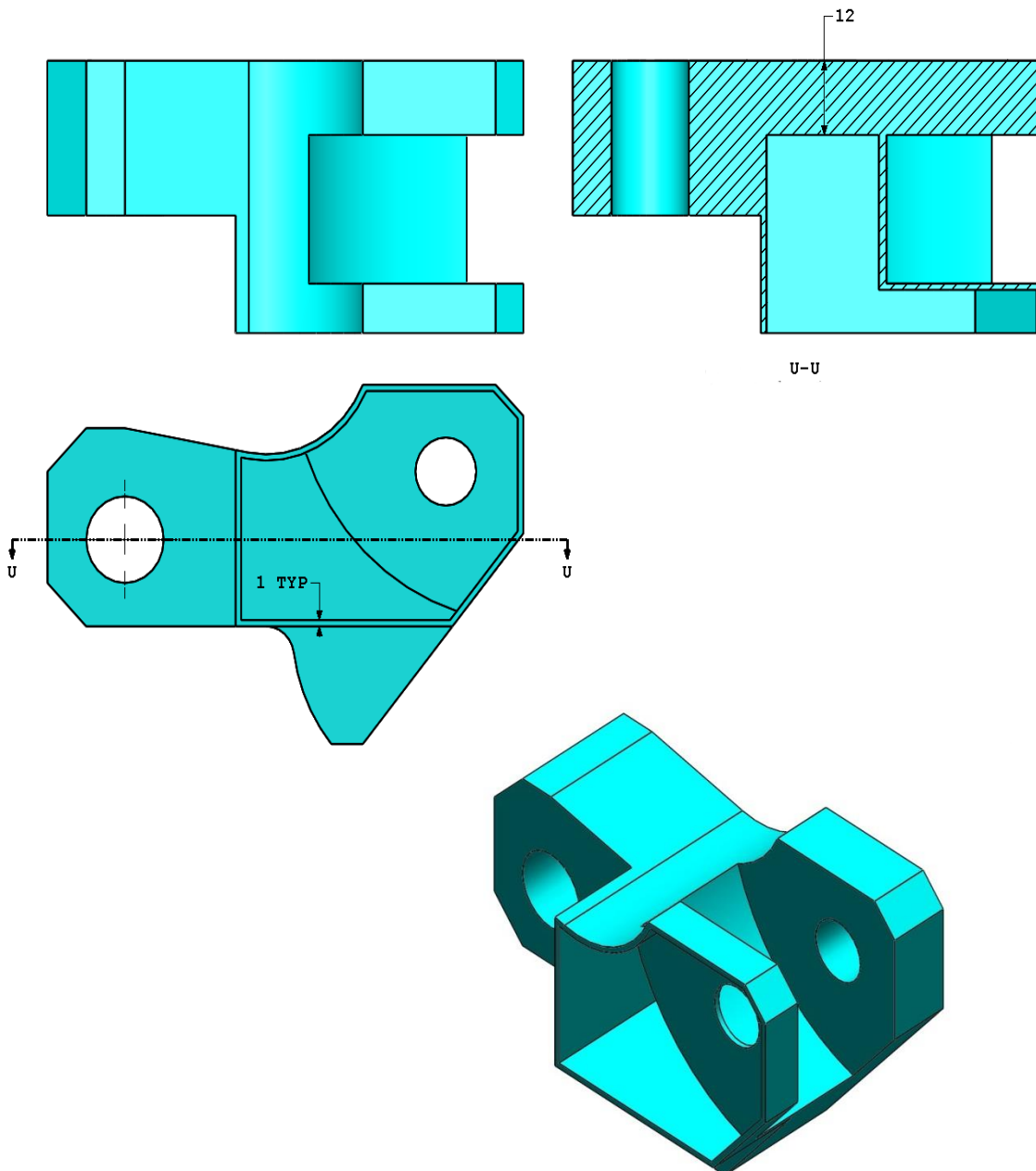
A = 86.00

B = 58.00

C = 44.00

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

Part Modeling: (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

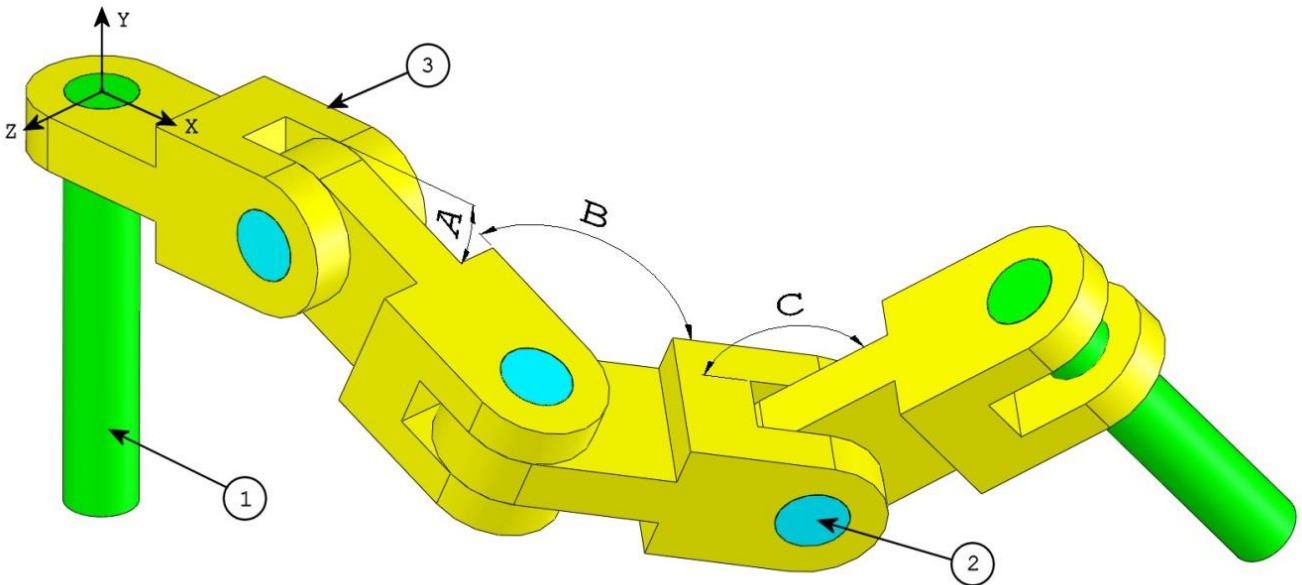
Use the part created in the previous question and modify it by adding a pocket.

Note 1: Only one pocket on one side is to be added. This modified part is not symmetrical. Note 2:

Assume all unshown dimensions are the same as in the previous question #5.

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

Assembly Modeling: (These images are to be used to answer Question #7 and 8)



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

It contains 2 long_pins (1), 3 short_pins (2), and 4 chain_links (3).

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Assembly origin: Arbitrary

-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. $A = 25$

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 this 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

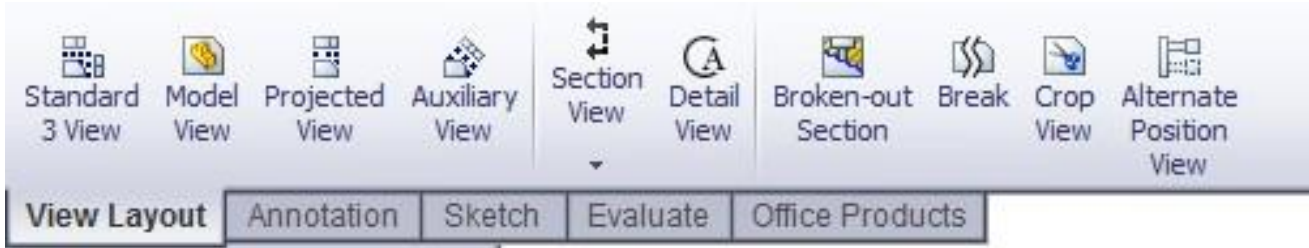
$B = 115$ degrees

$C = 135$ degrees

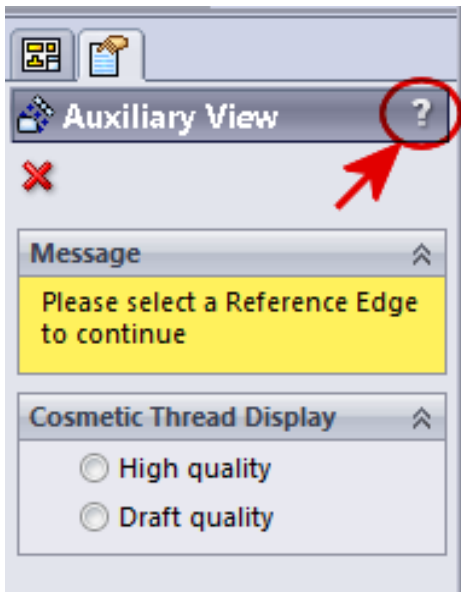
What is the center of mass of the assembly (millimeters)?

Hints and Tips:

Hint #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**.



Hint #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:



Hint #3: 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/

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