

Esercitazione n. 5 Titolo: CSWA Training

A.A. 2021-22

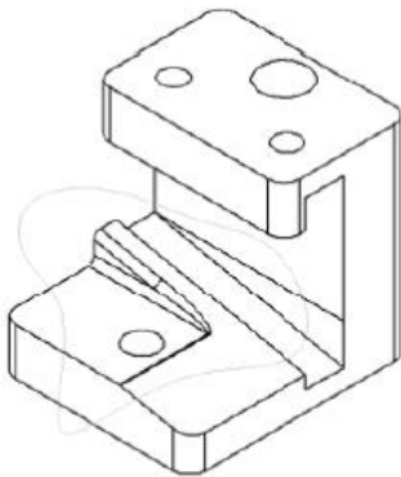
Studente:

COGNOME _____ NOME _____ Matr. _____

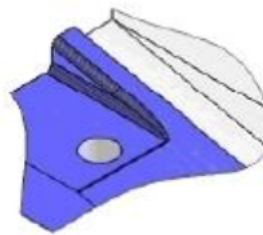
Compito:

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

- Section
- Crop
- Projected
- Isometric



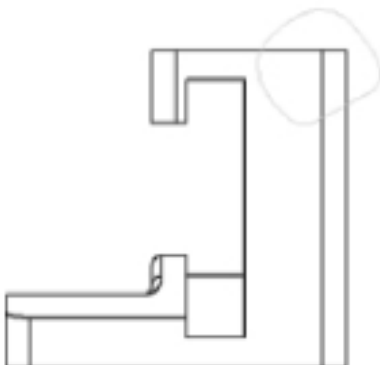
A



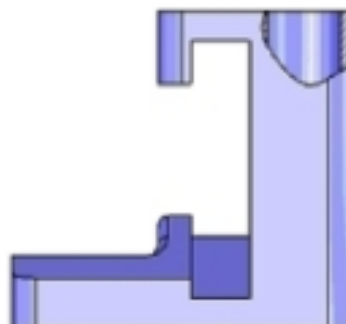
B

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

- Aligned Section
- Detail
- Broken-out Section
- Section



A



B

c. Model 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

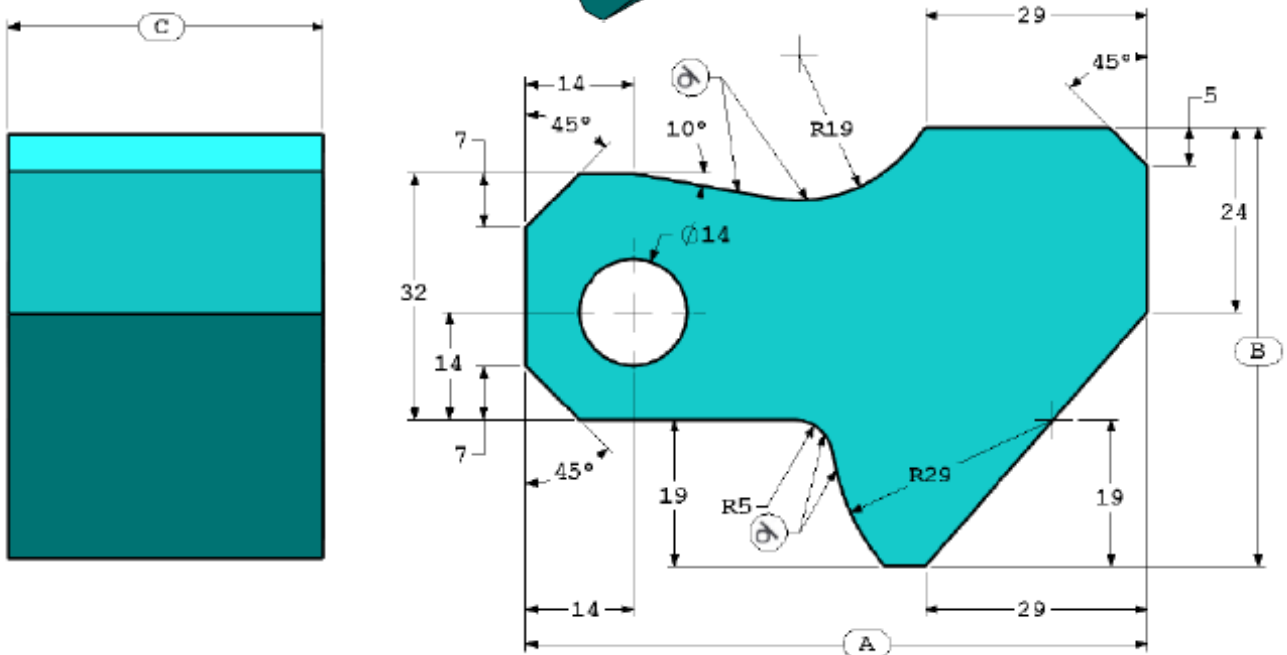
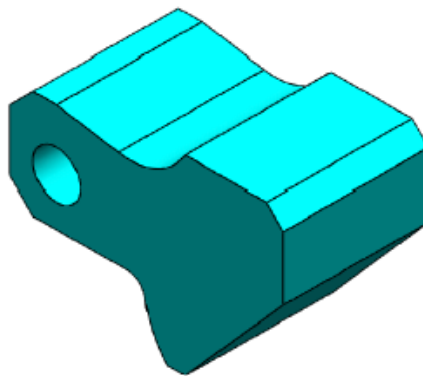
C = 43.00

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.

- 1028.33
- 118.93
- 577.64
- 939.54

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



d. 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)?

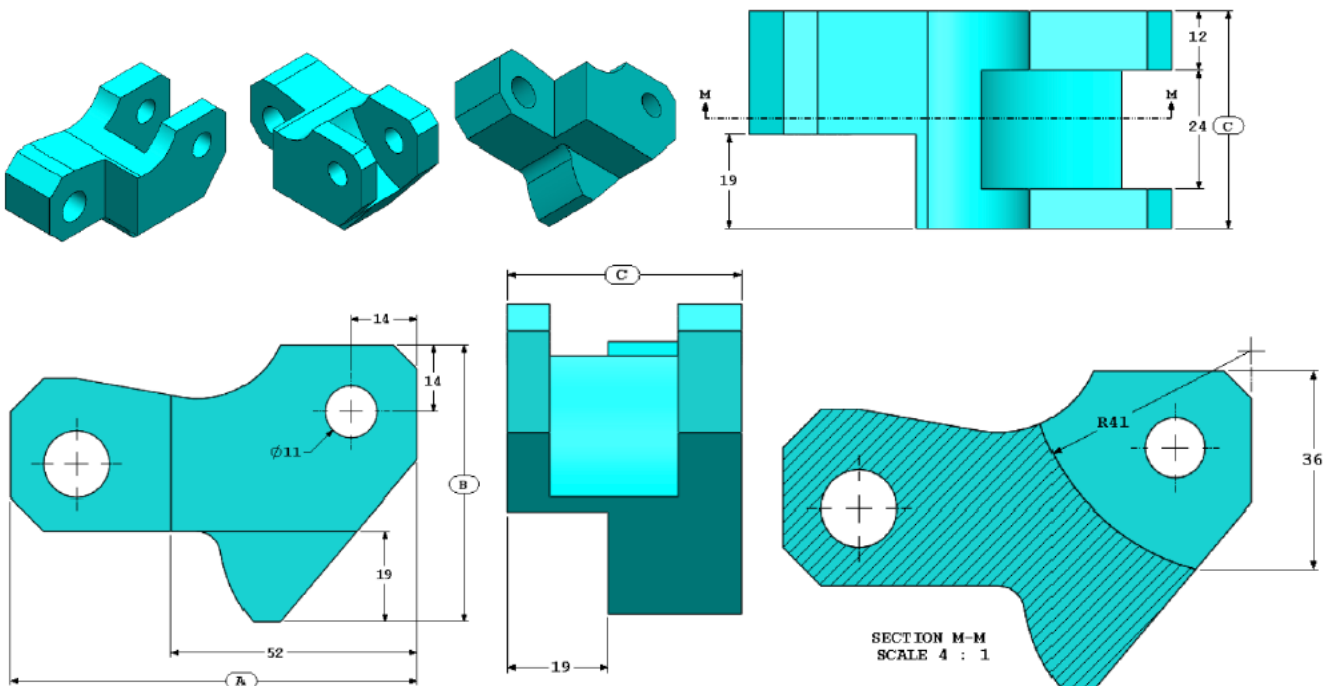
e. Modify the part in SOLIDWORKS.

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)?



f. 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

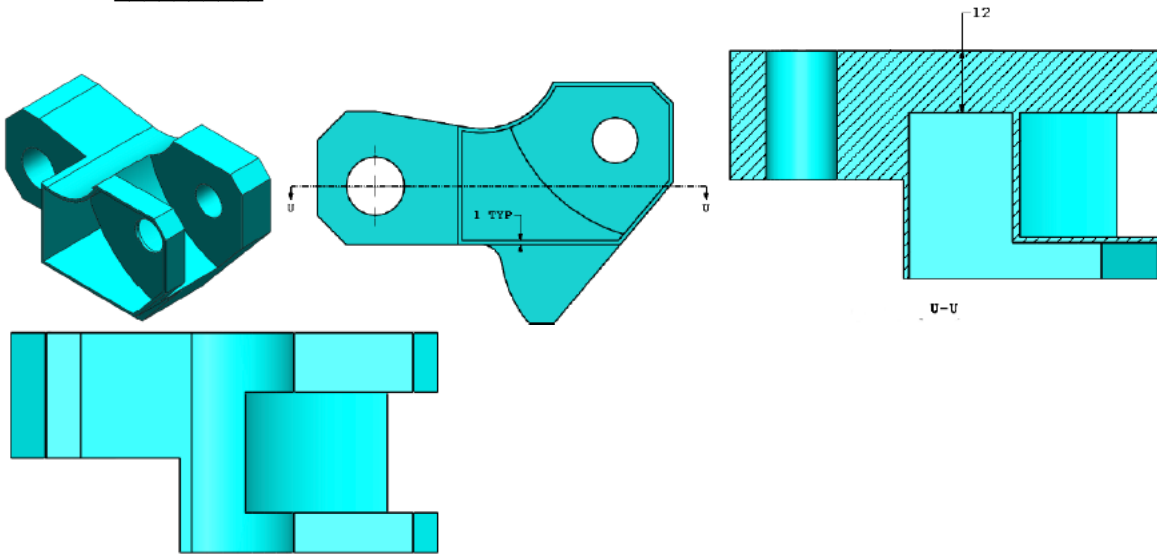
Use the part created in the previous question and modify it by adding a pocket.

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)?

□ _____



g. Model this assembly in SOLIDWORKS (Chain Link Assembly)

Download the attached zip file and open it.

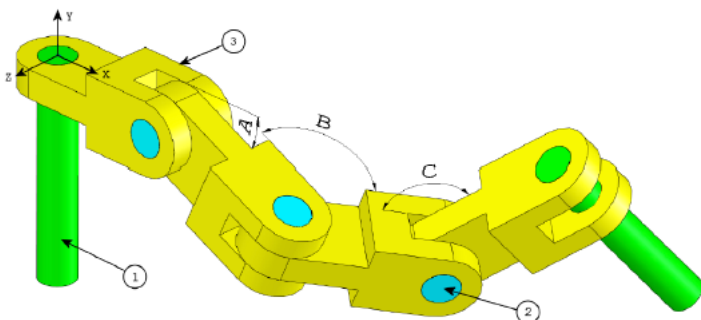
Save the contained parts and open those parts in SOLIDWORKS.

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.

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

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

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

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

h. 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)?
