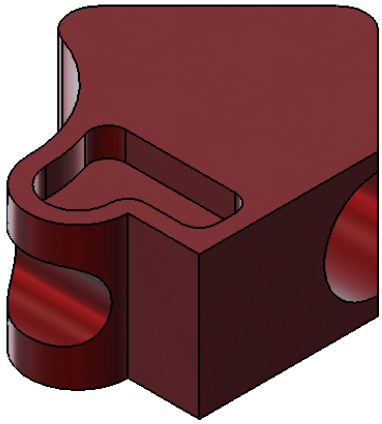
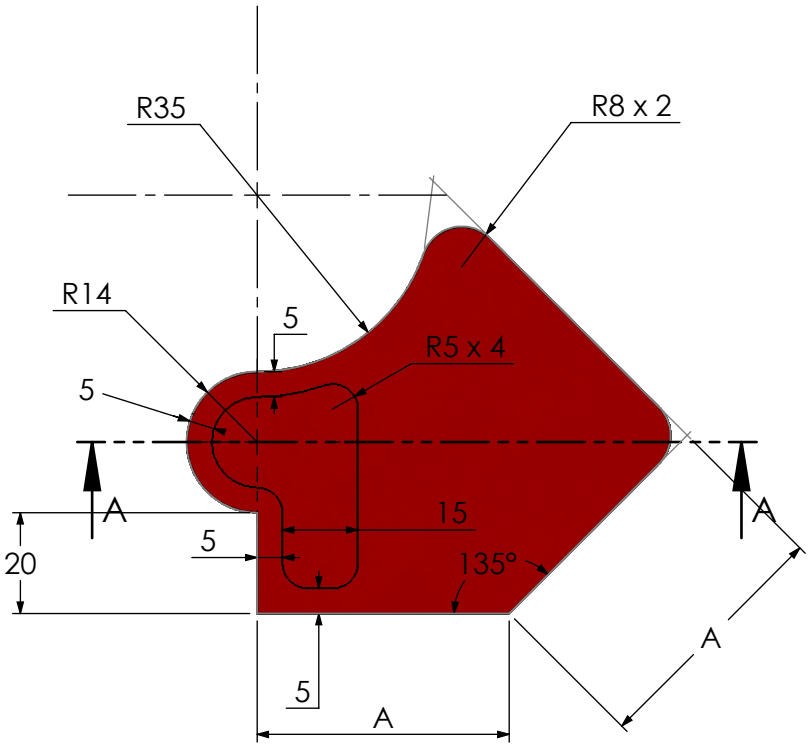
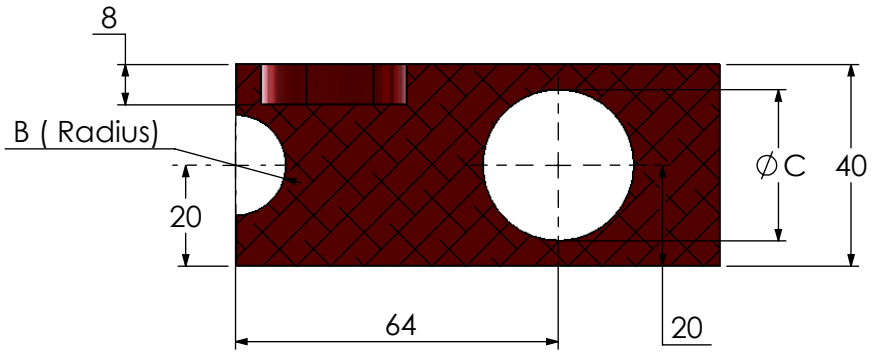
- Question 4: Create the following part.

- Read following questions before modeling.







SECTION A-A

Question 4 – Solid model 1

Unit system: MMGS (millimeter, gram, second)
Decimal places: 2
Part origin: Arbitrary
Material: 1060 Alloy
Density = 2700 kg/m^3
All holes through all unless shown otherwise

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

A = 50 mm
B = 10 mm
C = B + 20

(To save the most time, make use of linked dimensional values and equations.)
(Save each part after every question in a different file, so you can review your work)

-Measure the mass of the part.
What is the mass of the part (grams)?

a. 364.44

b. 345.94

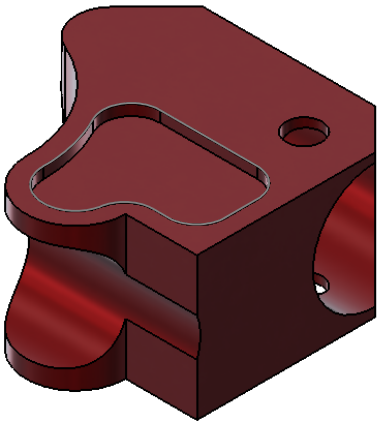
c. 323.56

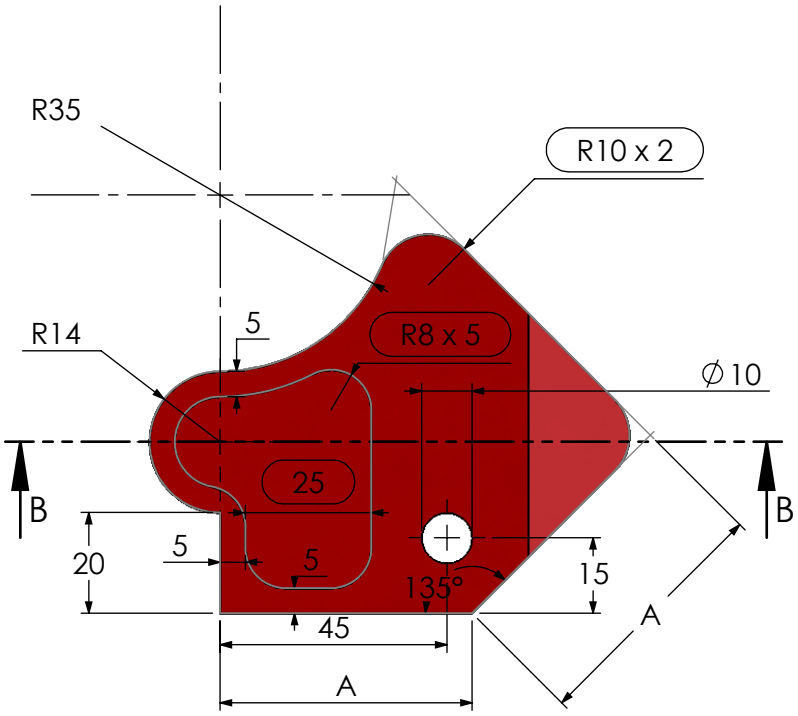
d. 355.22

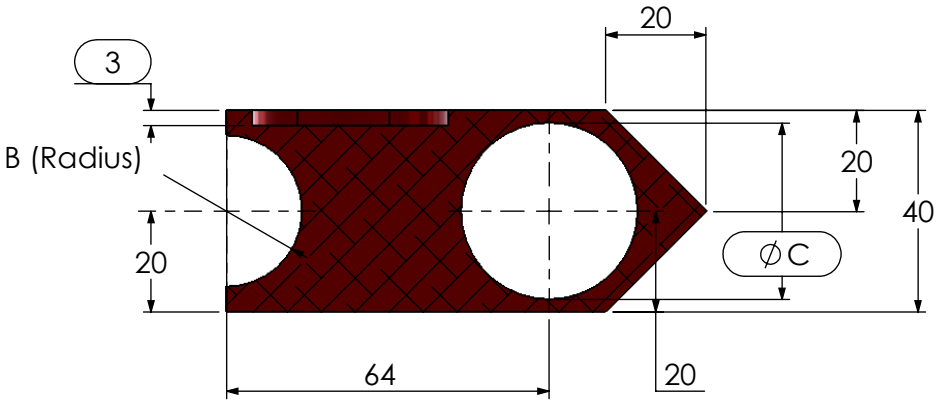
- Question 5: Make the following changes to the part from Question 4.

- Read following questions before modeling.

- Note: Modified dimensions are indicated with inspection bubbles, new dimensions are not.







SECTION B-B

Question 5 – Solid model 1: Update parameters

Unit system: MMGS (millimeter, gram, second)
Decimal places: 2
Part origin: Arbitrary
Material: 1060 Alloy
Density = 2700 kg/m^3
All holes through all unless shown otherwise

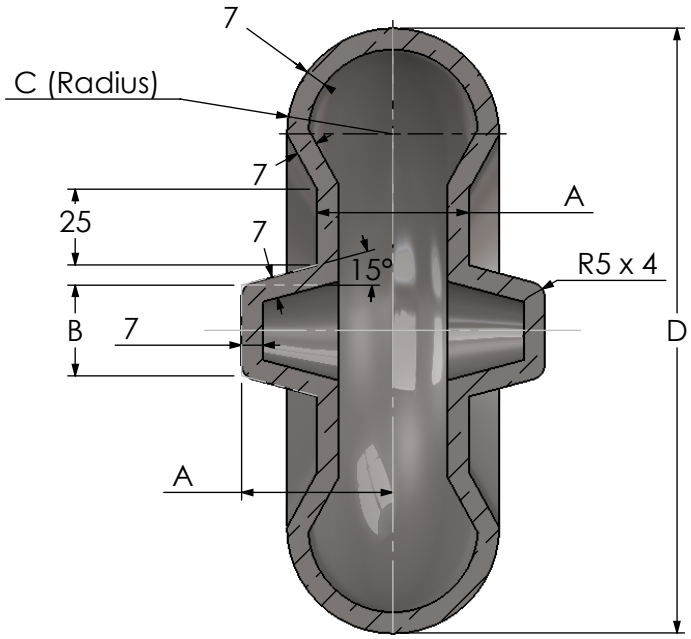
-Use the following parameters and equations which correspond to the dimensions labeled in the images:

A = 50 mm
B = 15 mm
C = B + 20

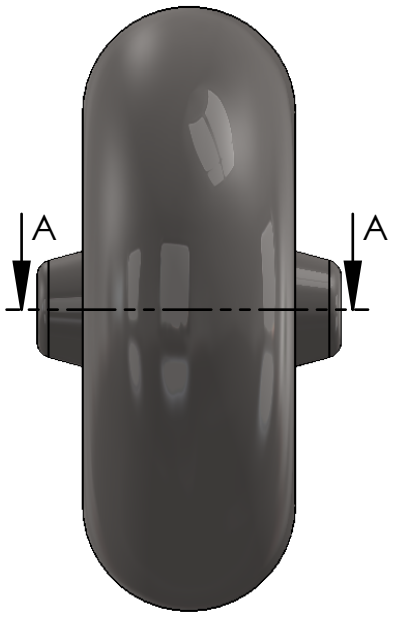
(To save the most time, make use of linked dimensional values and equations.)
(Save each part after every question in a different file, so you can review your work)

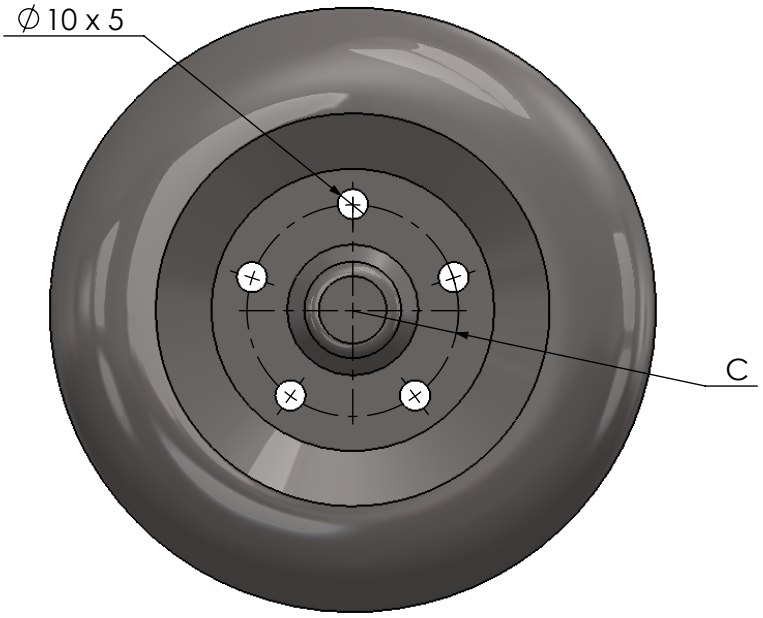
-Measure the mass of the part.
What is the mass of the part (grams)? _____

- Question 6: Create the part shown below.
- Note: Part is symmetrical across both the gray horizontal and vertical lines.
- Read following questions before modeling.



SECTION A-A





Question 6 – Solid model 2

Unit system: MMGS (millimeter, gram, second)
Decimal places: 2
Part origin: Arbitrary
Material: Brass
Density = 8500 kg/m^3
All holes through all unless shown otherwise

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

A = 50 mm
B = 30 mm
C = 35 mm
D = A * 4

(To save the most time, make use of linked dimensional values and equations.)
(Save each part after every question in a different file, so you can review your work)

-Measure the mass of the part.
What is the mass of the part (grams)?

a. 5010.96

b. 5112.66

c. 4996.35

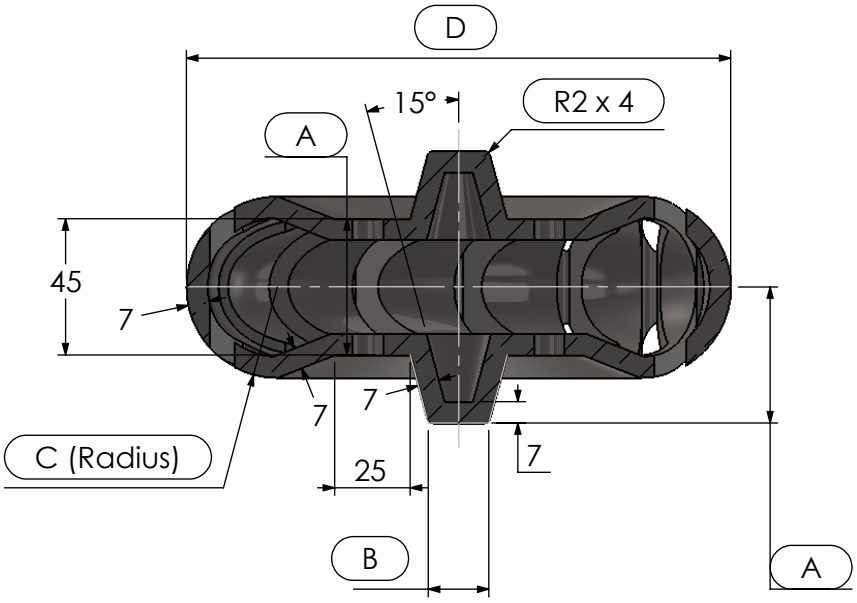
d. 5180.55

- Question 7: Make the following changes t othe part in Question 6.

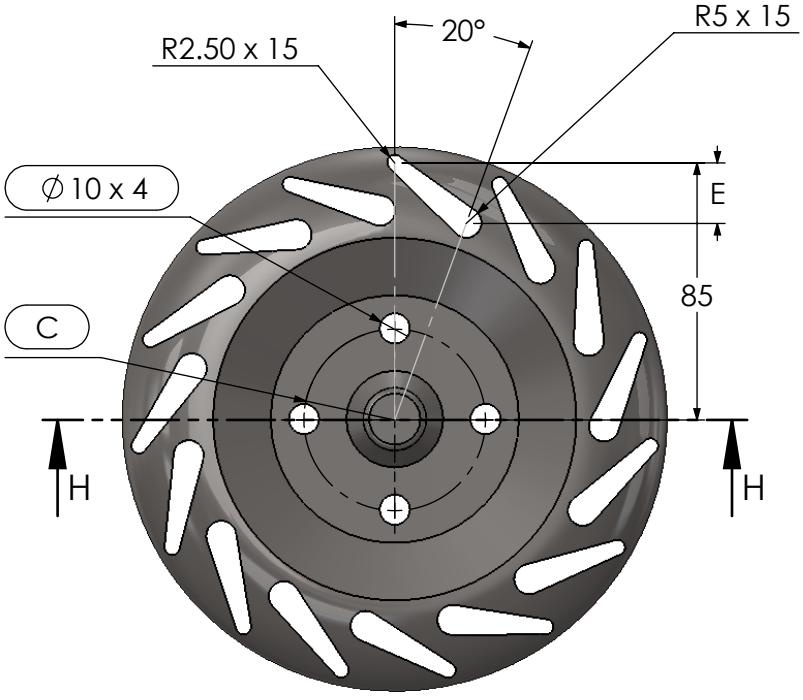
- Note: Part is symmetrical across both the gray horizontal and vertical lines.

- Note: Modified dimensions are indicated with inspection bubbles, new dimensions are not.

- Read following questions before modeling.



SECTION H-H



Question 7 – Solid model 2: Update parameters

Unit system: MMGS (millimeter, gram, second)
Decimal places: 2
Part origin: Arbitrary
Material: Brass
Density = 8500 kg/m^3
All holes through all unless shown otherwise

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

A = 45 mm
B = 20 mm
C = 30 mm
D = A * 4
E = C - 10

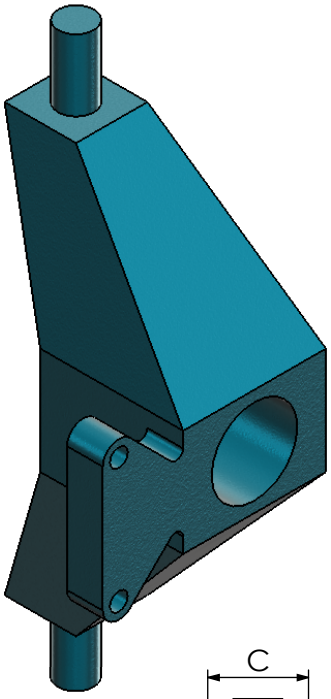
(To save the most time, make use of linked dimensional values and equations.)
(Save each part after every question in a different file, so you can review your work)

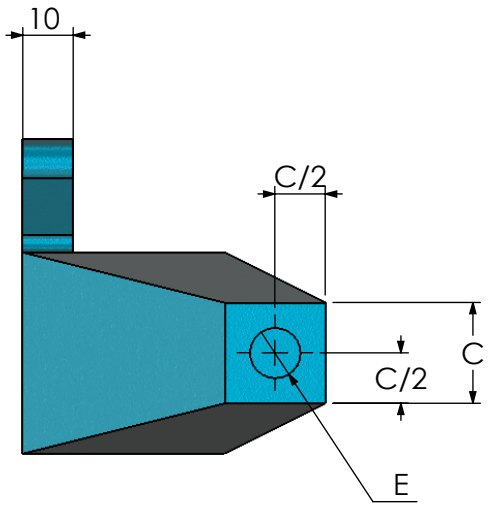
-Measure the mass of the part.
What is the mass of the part (grams)? _____

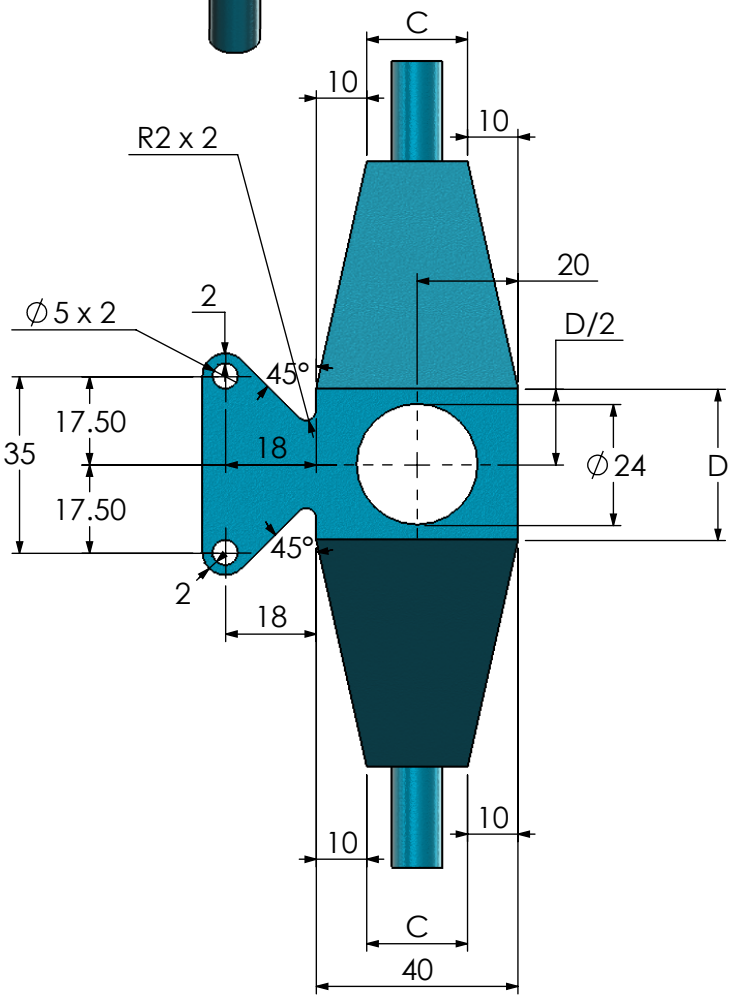
- Question 12: Create the part shown below.

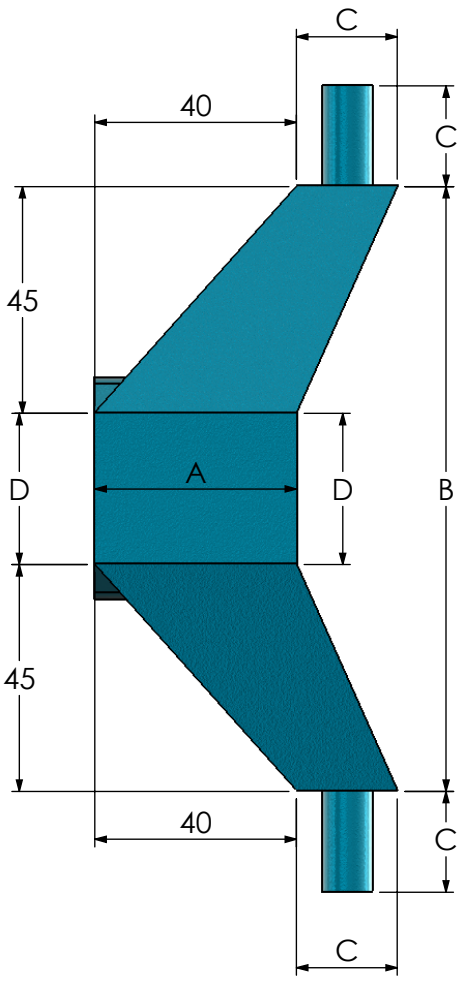
- Note: Part is symmetrical across the horizontal line passing through the center bore

- Read following questions before modeling.









Question 12 – Solid model 3

Unit system: MMGS (millimeter, gram, second)
Decimal places: 2
Part origin: Arbitrary
Material: Cast Alloy Steel
Density = 7300 kg/m^3
All holes through all unless shown otherwise

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

A = 40 mm
B = 120 mm
C = 20 mm
D = B/4
E = C/2

(To save the most time, make use of linked dimensional values and equations.)
(Save each part after every question in a different file, so you can review your work)

-Measure the mass of the part.
What is the mass of the part (grams)?

a. 923.18

b. 904.86

c. 955.12

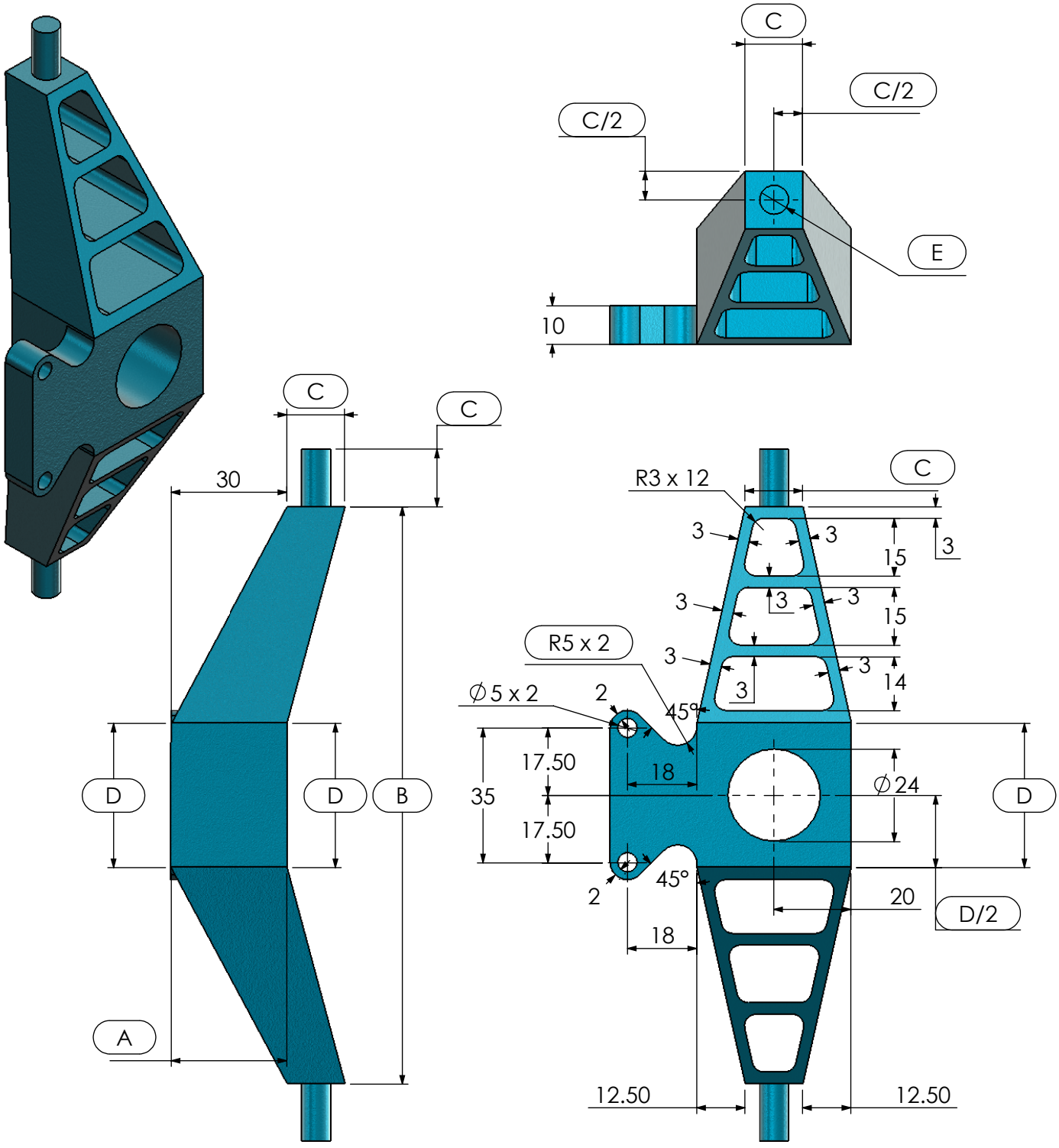
d. 897.21

- Question 13: Make the following changes to the part from Question 12.

- Note: Part is symmetrical across the horizontal line passing through the center bore

- Note: Modified dimensions are indicated with inspection bubbles, new dimensions are not.

- Read following questions before modeling.



Question 13 – Solid model 3: Update Parameters

Unit system: MMGS (millimeter, gram, second)
Decimal places: 2
Part origin: Arbitrary
Material: Cast Alloy Steel
Density = 7300 kg/m^3
All holes through all unless shown otherwise

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

A = 30 mm
B = 150 mm
C = 15 mm
D = B/4
E = C/2

(To save the most time, make use of linked dimensional values and equations.)
(Save each part after every question in a different file, so you can review your work)

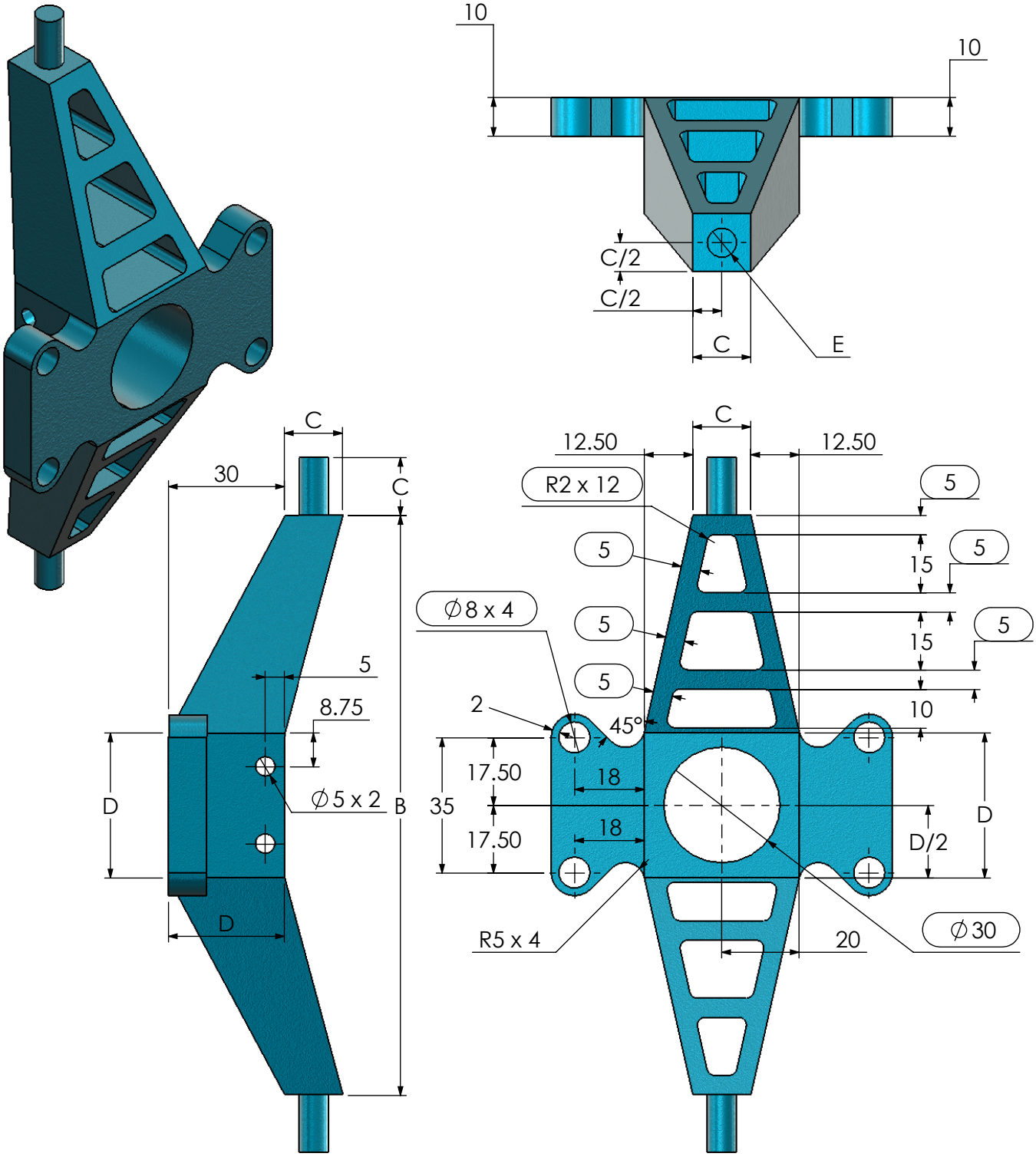
-Measure the mass of the part.
What is the mass of the part (grams)? _____

- Question 14: Make the following changes to the part from Question 13.

- Note: Part is symmetrical across the horizontal and vertical lines passing through the center bore

- Note: Modified dimensions are indicated with inspection bubbles, new dimensions are not.

- Read following questions before modeling.



Question 14 – Solid model 3: Update Parameters again.

Unit system: MMGS (millimeter, gram, second)
Decimal places: 2
Part origin: Arbitrary
Material: Cast Alloy Steel
Density = 7300 kg/m^3
All holes through all unless shown otherwise

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

A = 30 mm
B = 150 mm
C = 15 mm
D = B/4
E = C/2

(To save the most time, make use of linked dimensional values and equations.)
(Save each part after every question in a different file, so you can review your work)

-Measure the mass of the part.
What is the mass of the part (grams)? _____