

SOLIDWIZE

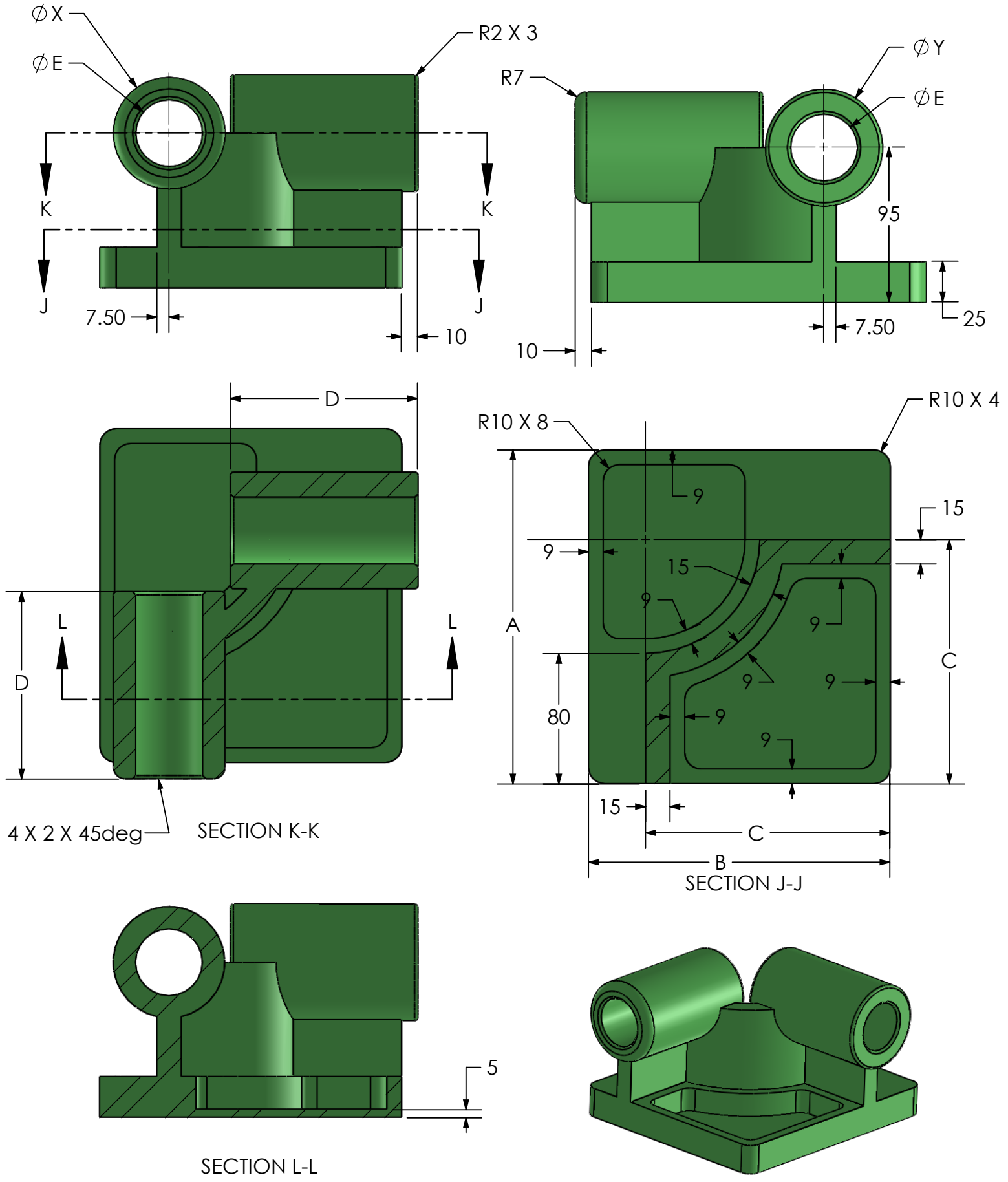
ONLINE SOLIDWORKS TRAINING

CSWP Sample Exam 2 (2012)

Segment 1 of the CSWP Core

- This test is made up of a series of problems broken down into sets of questions. Each problem set of questions comes with a description that outlines the problems to be solved for that set.
- This section contains 5 questions
- You should be able to complete all 5 questions within 90 minutes
- Consult answer key after completion of this section

-Initial Part: Create the Part Shown below. Use for Question 1 and 2
 -Read the following questions before modeling



Segment 1

Question 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 = 7700 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:

$$A = 205 \text{ mm}$$

$$B = 185 \text{ mm}$$

$$C = 150 \text{ mm}$$

$$D = 115 \text{ mm}$$

$$E = 41 \text{ mm}$$

$$X = A/3$$

$$Y = B/3 + 10$$

(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)?

a. 11204

b. 9942

c. 10033

d. 11414

Question 2. Update Parameters of the Initial Part

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

Material: Alloy Steel

Density = 7700 kg/m³

All holes through all unless shown otherwise

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

$$A = 220 \text{ mm}$$

$$B = 195 \text{ mm}$$

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

$$D = 112 \text{ mm}$$

$$E = 39 \text{ mm}$$

$$X = A/3$$

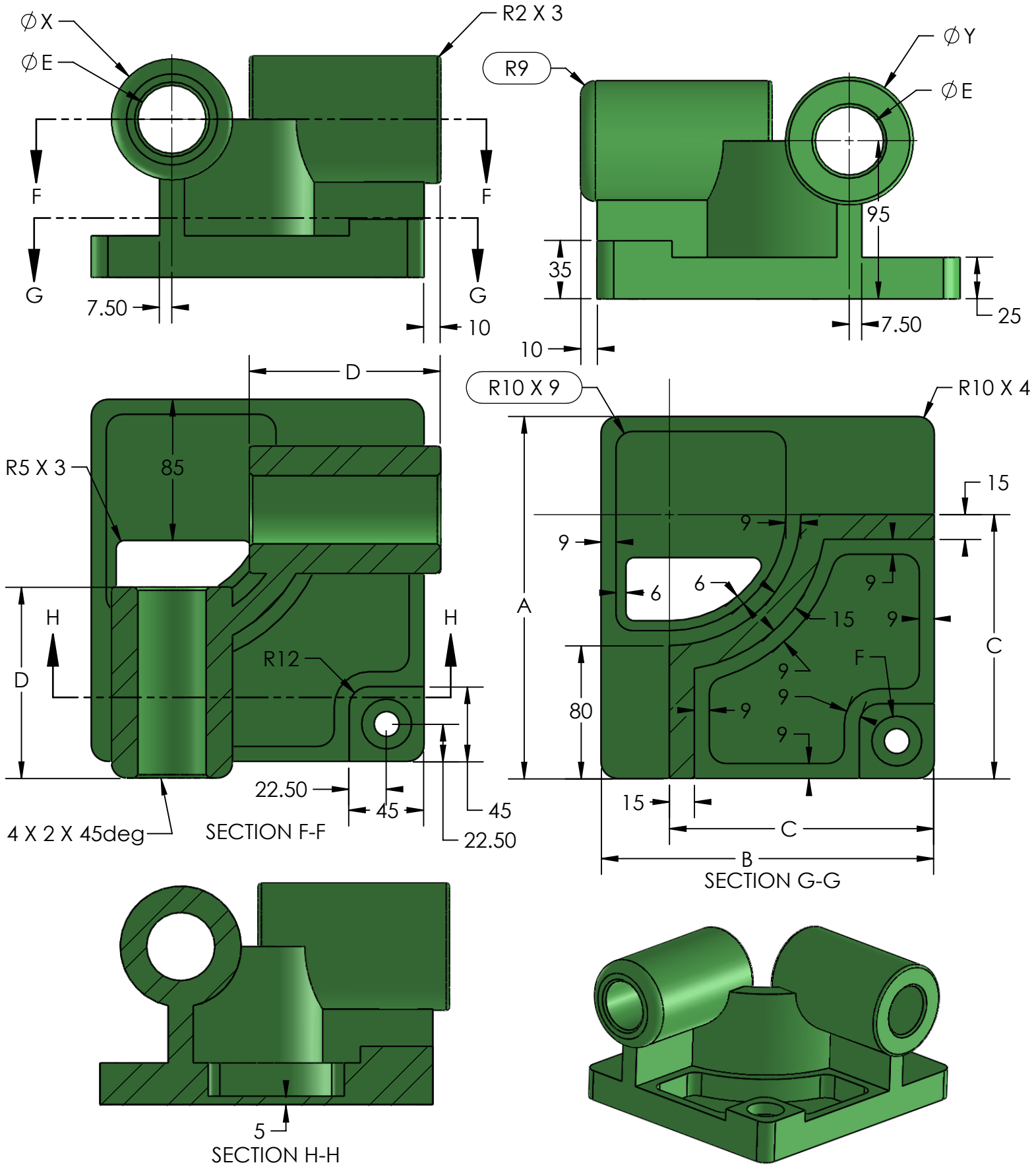
$$Y = B/3 + 10$$

-Measure the mass of the part.

What is the mass of the part (grams)?

Modified Part: Create the Part Shown below. Use for Question 3.

Note: Modified Dimensions are indicated with inspection bubbles, new dimensions are not. "F" indicates a hole wizard hole at the center of the feature.



Question 3. Modify the Part Based on New Images

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

Material: Alloy Steel

Density = 7700 kg/m³

All holes through all unless shown otherwise

-Changes to preexisting geometry are labeled with inspection bubbles. New dimensions are not. Closely examine the dimensions as there are quite a few changes.

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

A = 218 mm

B = 200 mm

C = 159 mm

D = 115 mm

E = 41 mm

X = A/3

Y = B/3 + 10

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

-Measure the mass of the part.

What is the mass of the part (grams)?

a. 11761

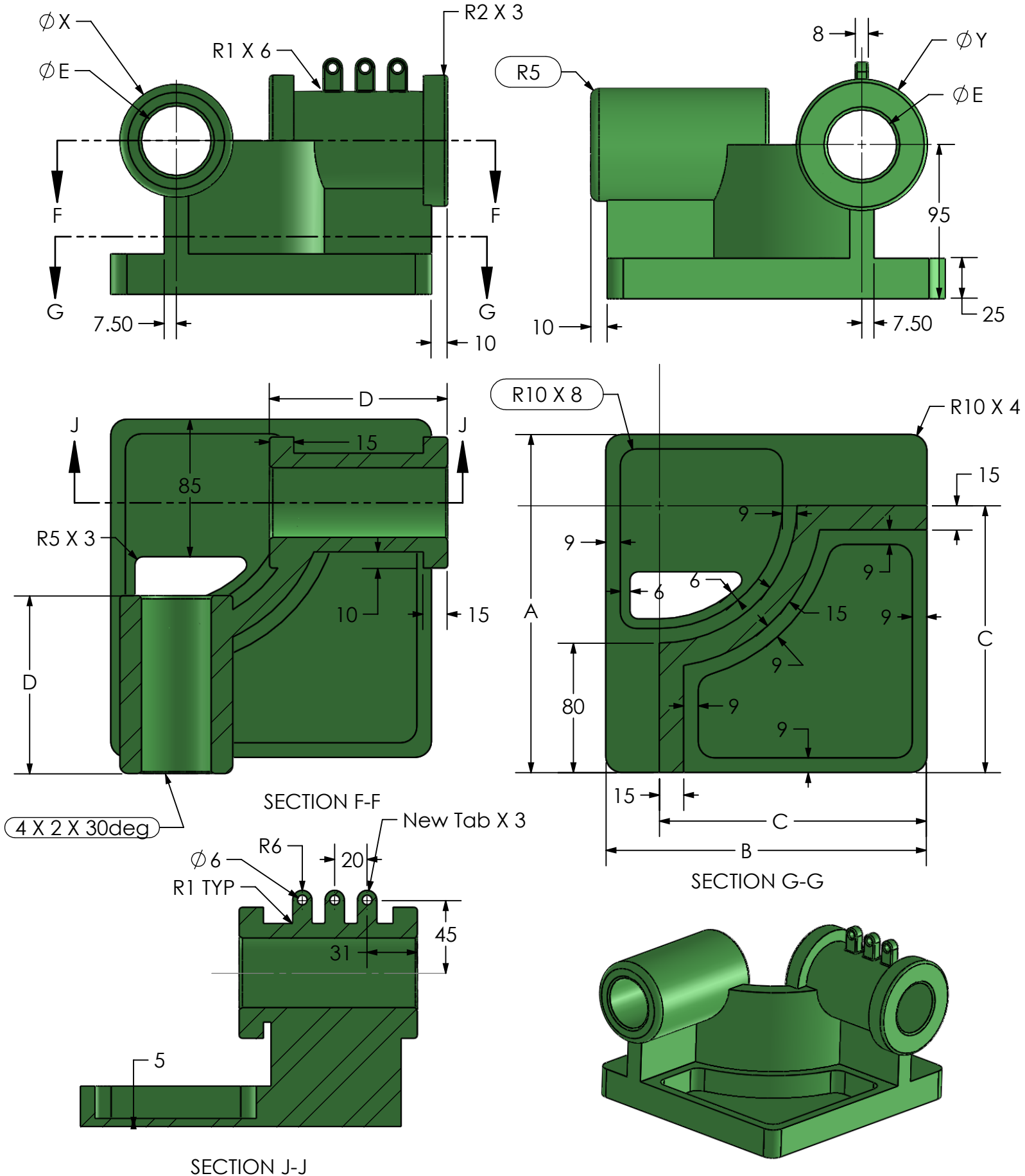
b. 12256

c. 15247

d. 10942

Modified Part: Create the Part Shown below. Use for Question 4 and 5.

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



Question 4. Modify the Part Based on New Images, Again

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

Material: Alloy Steel

Density = 7700 kg/m³

All holes through all unless shown otherwise

-Changes to preexisting geometry are labeled with inspection bubbles. New dimensions are not. Closely examine the dimensions as there are quite a few changes.

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

$$A = 209 \text{ mm}$$

$$B = 198 \text{ mm}$$

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

$$D = 110 \text{ mm}$$

$$E = 43 \text{ mm}$$

$$X = A/3$$

$$Y = B/3 + 15$$

Note that the value for Y has changed.

-Measure the mass of the part.

What is the mass of the part (grams)?

a. 9763

b. 9452

c. 10021

d. 9681

Question 5. Update Parameters Again

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

Material: Alloy Steel

Density = 7700 kg/m³

All holes through all unless shown otherwise

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

$$A = 220 \text{ mm}$$

$$B = 205 \text{ mm}$$

$$C = 170 \text{ mm}$$

$$D = 112 \text{ mm}$$

$$E = 45 \text{ mm}$$

$$X = A/3$$

$$Y = B/3 + 15$$

-Measure the mass of the part.

What is the mass of the part (grams)?