

# SOLIDWIZE

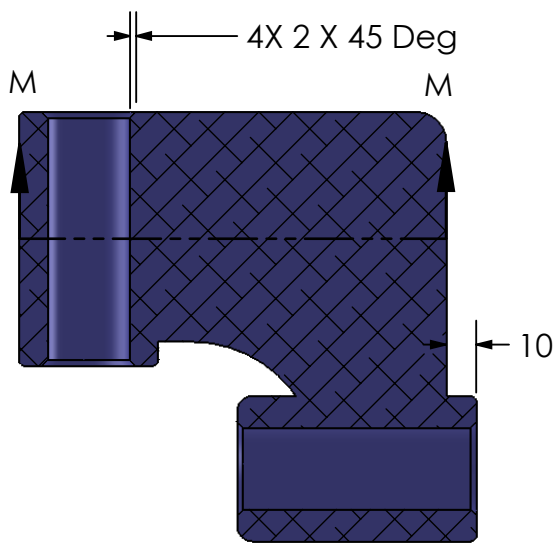
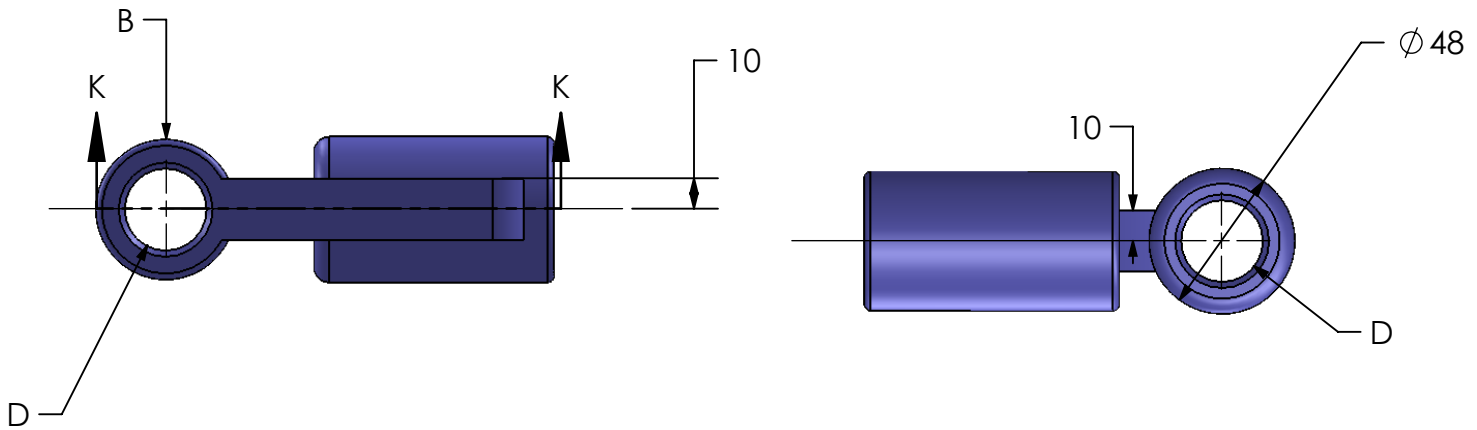
## ONLINE SOLIDWORKS TRAINING

### CSWP Sample Exam 1 (2012)

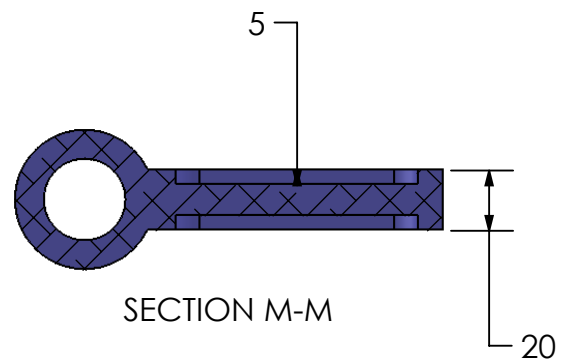
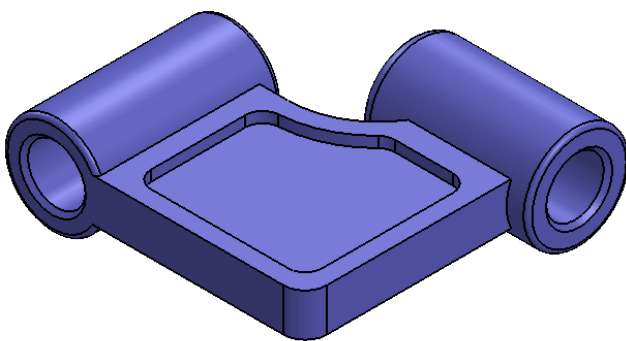
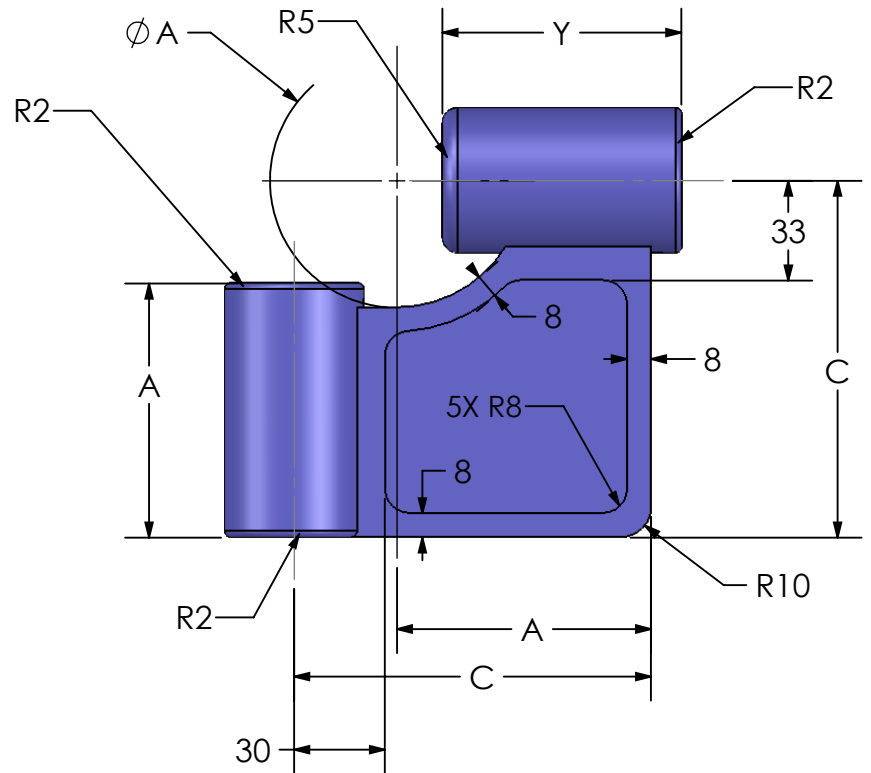
#### **Segment 1 of the CSWP Core**

- 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 following questions before modeling



SECTION K-K



SECTION M-M

## 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: 1060 Alloy

Density =  $2700 \text{ kg/m}^3$

All holes through all unless shown otherwise

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

$A = 84 \text{ mm}$

$B = 46 \text{ mm}$

$C = 118 \text{ mm}$

$D = 27 \text{ mm}$

$Y = C/2 + 20$

(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. 822

b. 807

c. 791

d. 862

## Question 2. Update Parameters of the Initial Part

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

Material: 1060 Alloy

Density = 2700 kg/m<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 = 90 mm

B = 45 mm

C = 135 mm

D = 22 mm

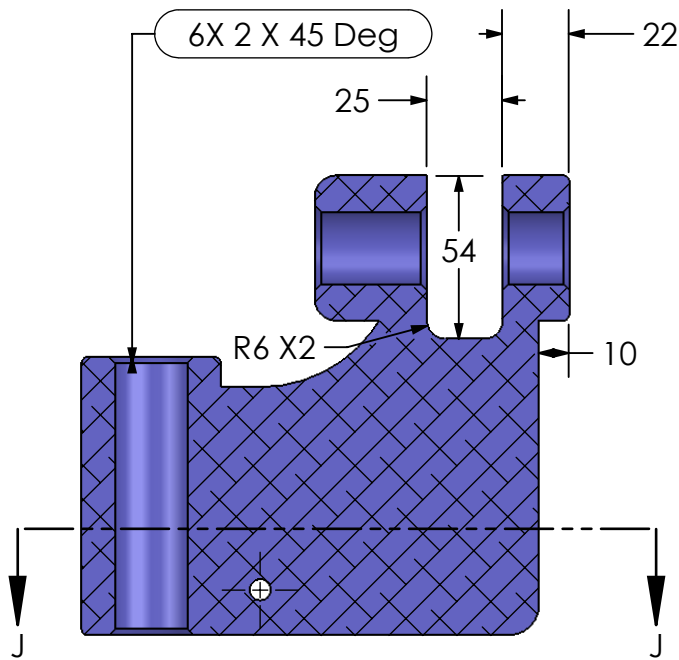
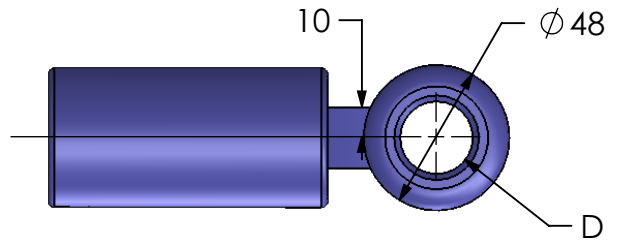
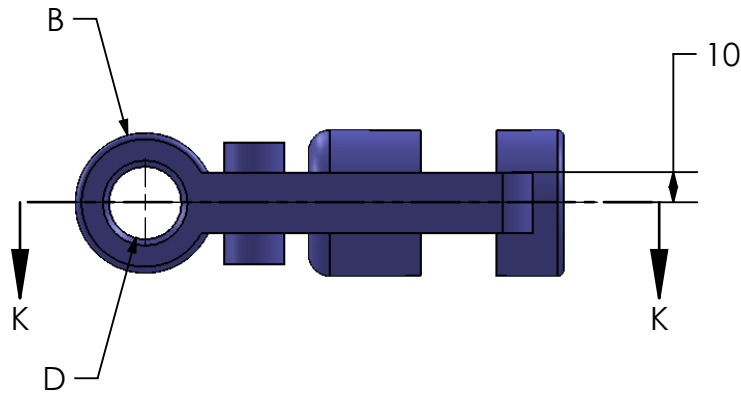
Y = C/2 + 20

-Measure the mass of the part.

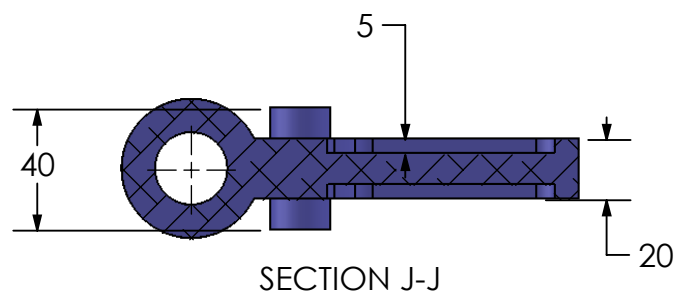
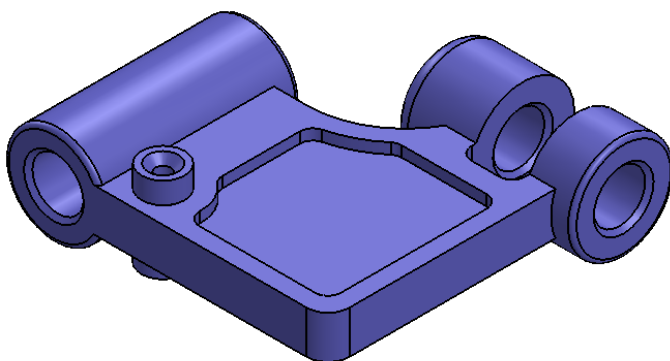
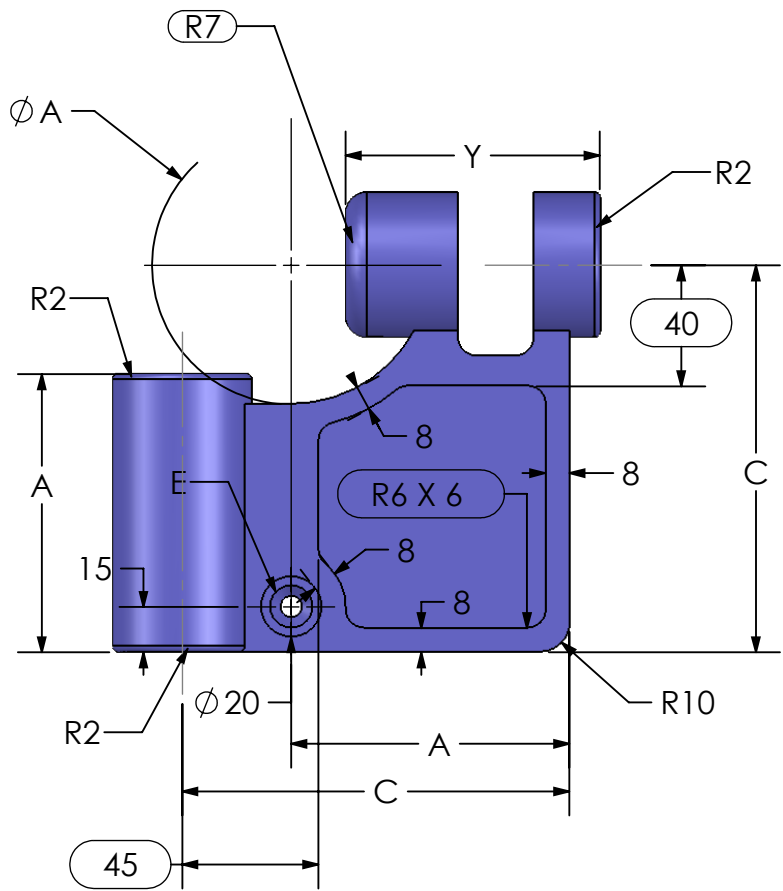
What is the mass of the part (grams)?

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

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



SECTION K-K



SECTION J-J

### Question 3. Modify the Part Based on New Images

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

Material: 1060 Alloy

Density = 2700 kg/m<sup>3</sup>

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 = 92 mm

B = 46 mm

C = 128 mm

D = 24 mm

Y = C/2 + 20

E = Hole Wizard Standard: ISO Countersink

Type: Hex Socket CTSK Head ISO 10642

Size: M6

Fit: Normal

Through Hole Diameter: 7.00 mm

Counterbore Diameter: 14.00 mm

Counter Sink Angle: 90deg

End Condition: Through All

-Measure the mass of the part.

What is the mass of the part (grams)?

a. 967

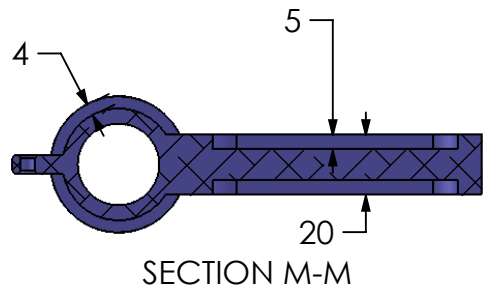
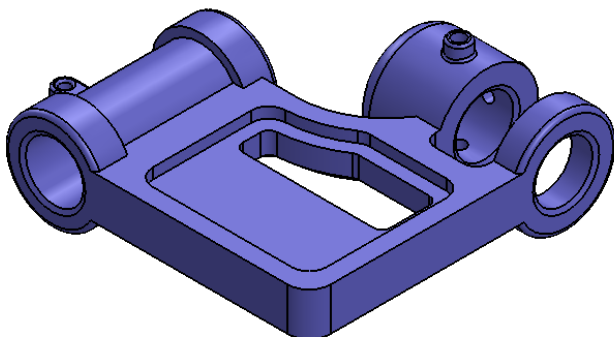
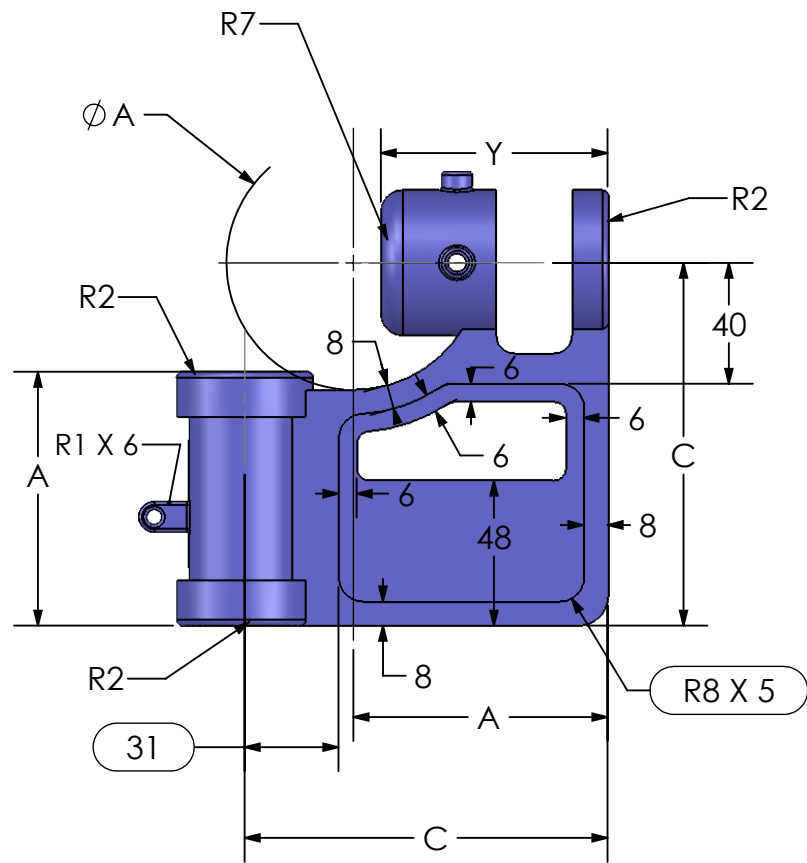
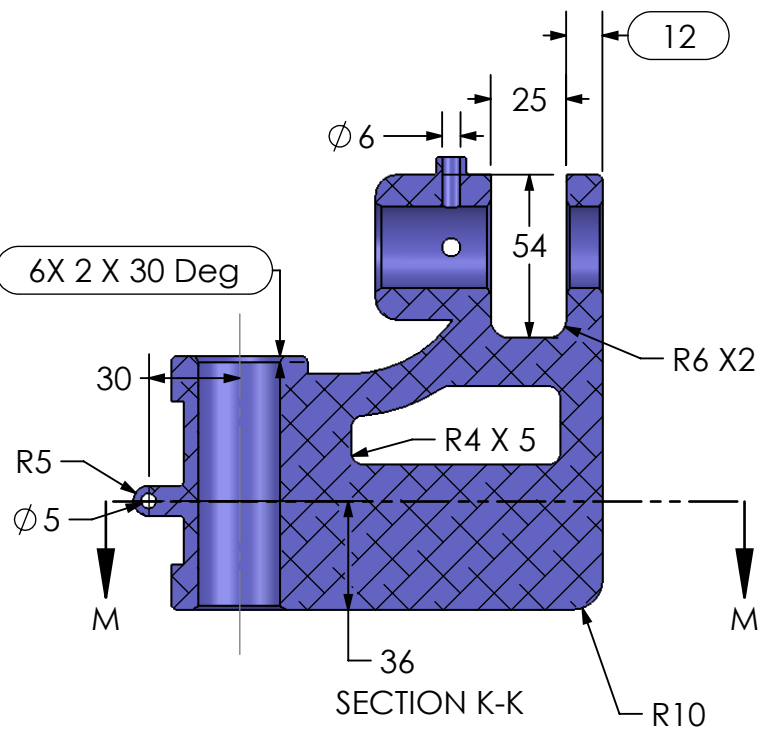
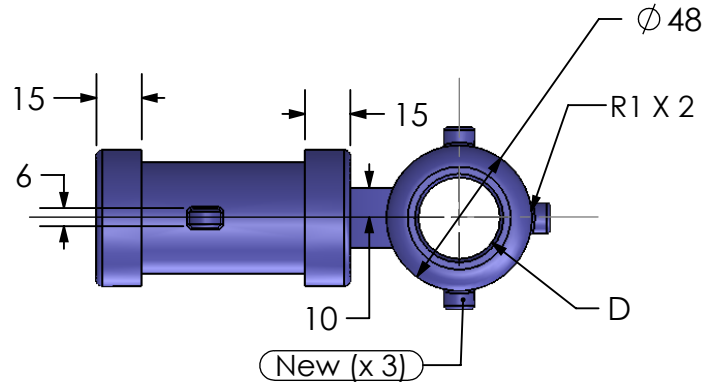
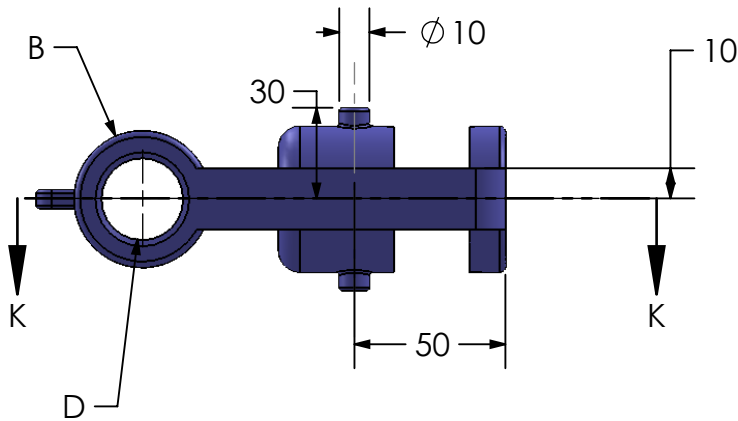
b. 864

c. 924

d. 908

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: 1060 Alloy

Density = 2700 kg/m<sup>3</sup>

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:

$$A = 84 \text{ mm}$$

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

$$C = 120 \text{ mm}$$

$$D = 27 \text{ mm}$$

$$Y = C/2 + 15$$

Note that the value for Y has changed.

-Measure the mass of the part.

What is the mass of the part (grams)?

a. 655

b. 702

c. 604

d. 581



## Question 5. Update Parameters Again

Unit system: MMGS (millimeter, gram, second)

Decimal places: 2

Part origin: Arbitrary

Material: 1060 Alloy

Density = 2700 kg/m<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 = 90 mm

B = 48 mm

C = 125 mm

D = 29 mm

Y = C/2 + 15

-Measure the mass of the part.

What is the mass of the part (grams)?