CSWA Exam Practice Questions

Overview

This document contains practice questions that can be used to prepare for the Certified SolidWorks Associate (CSWA) exam. The questions are intended to help you become familiar with the types of questions featured on the CSWA exam. Additional information about the CSWA exam is available on the student Web site (www.g-wlearning.com/CAD).

There are 10 practice questions in this document. The questions are identified by exam category. Use the questions to assess your modeling skills and knowledge of SolidWorks tools and techniques. In addition, use the questions to measure your ability to work efficiently. The CSWA exam is a timed, online exam that must be completed in 180 minutes (3 hours) or less. Questions related to the *Basic Modeling Theory and Drawing Theory* exam category and the *Advanced Modeling Theory and Analysis* exam category are theory-based questions. They should be answered in 10 minutes or less. Questions related to the *Part Modeling*, *Advanced Part Modeling*, and *Assembly Modeling* exam categories are modeling questions. These questions require you to model a part or assembly and should be completed in 45 minutes or less. Use this as a general guideline when working through the practice questions.

Practice Question 1.

A
Please click
to enlarge

B
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to enlarge

C
Please click
to enlarge

Part Modeling

Model the part shown in the figures provided. Use the following information.
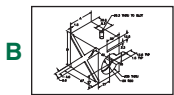
- Unit system: MMGS (millimeter, gram, second)
- Decimal places: 2
- Part origin: Arbitrary
- A = 50
- B = 70
- Material: AISI 1020
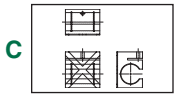
What is the overall mass of the part in grams?
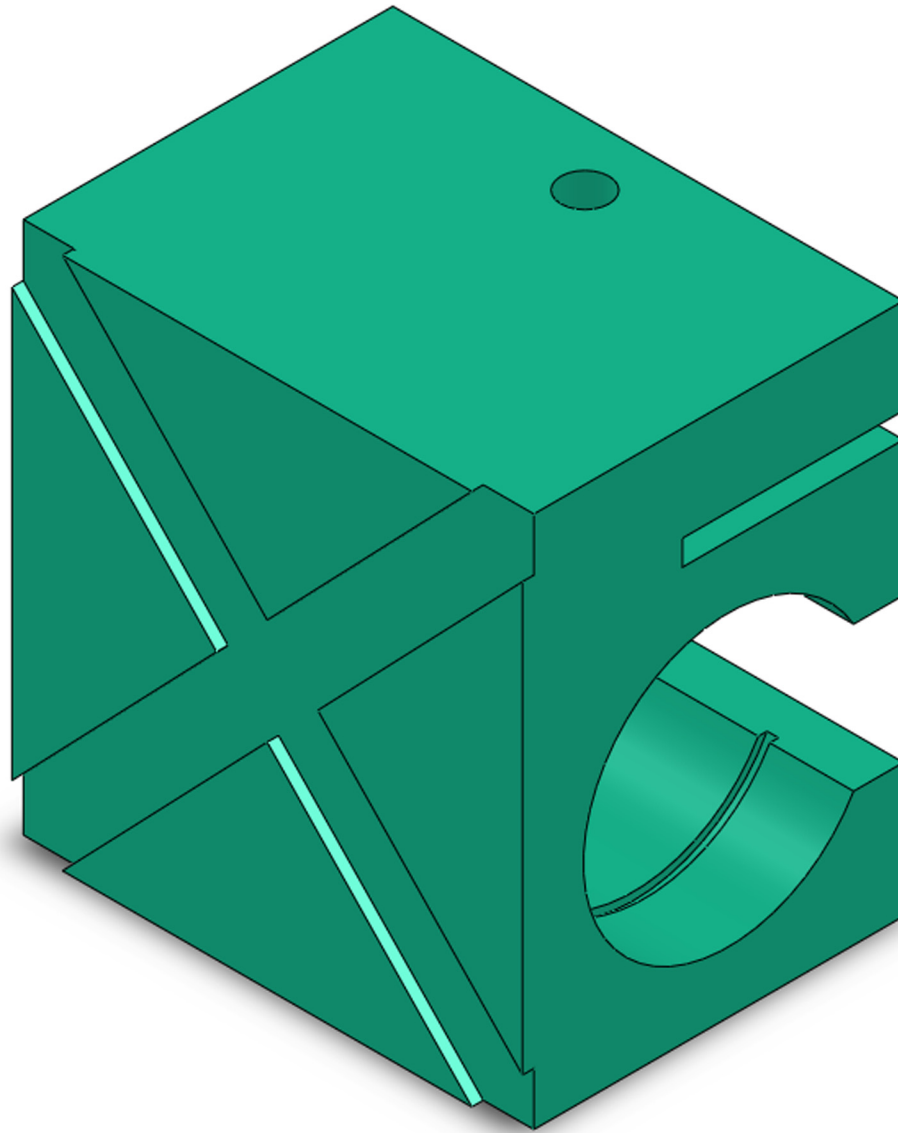
A. 878.62
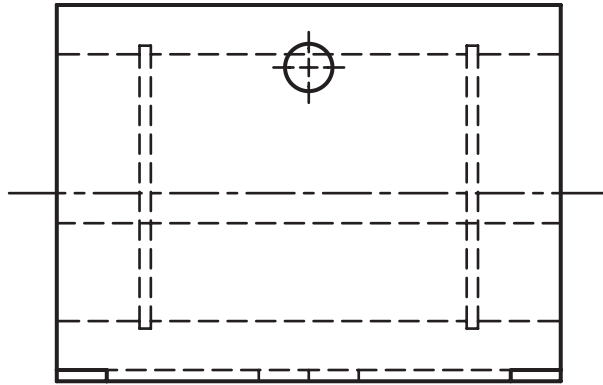
B. 998.54

C. 1098.32

D. 1127.72

Practice Question 1A

Practice Question 1B

ø6.3 THRU TO SLOT

33.5
8.3
A
1.5
29
12.5
B
3.3
42
12.5 TYP
1.5 TYP
19
4.8
9.6
67
27
27
ø38 THRU
2X R20
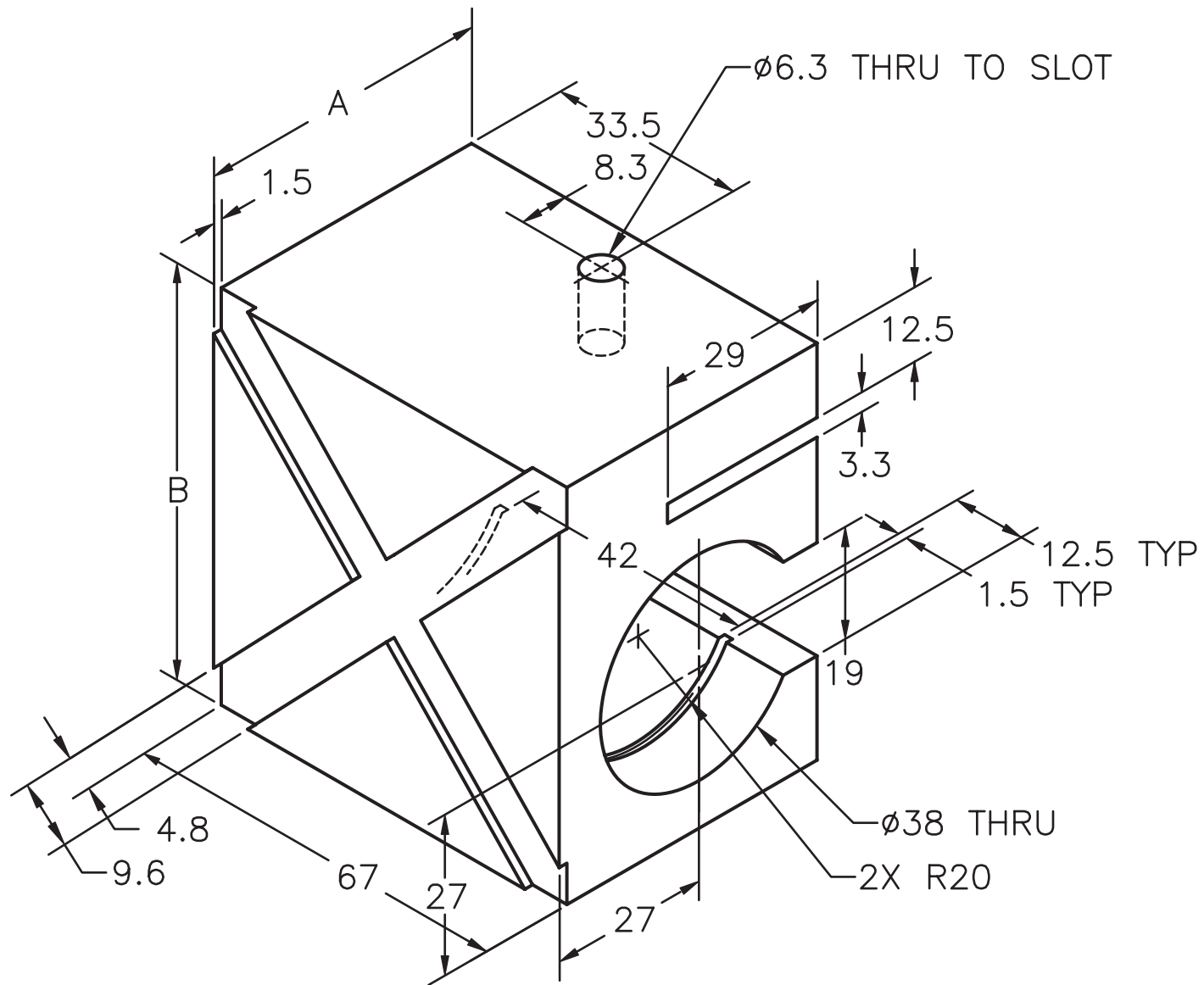
Practice Question 1C
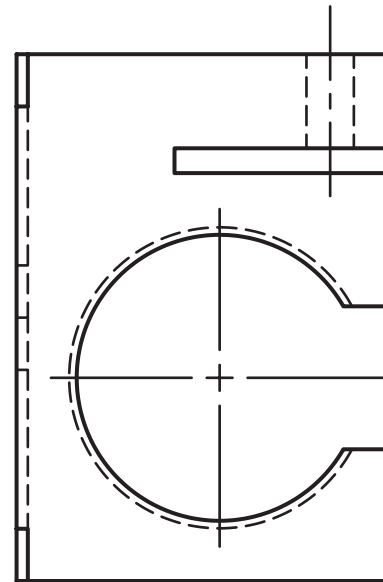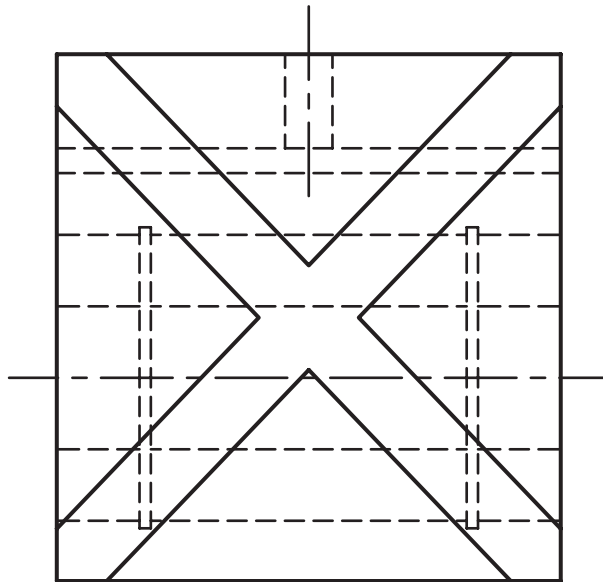
Practice Question 2.

A

Please click to enlarge

B

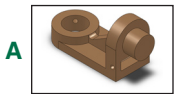**Please click to enlarge**

C

Please click to enlarge

Part Modeling

Model the part shown in the figures provided. Use the following information.

- Unit system: IPS (inch, pound, second)
- Decimal places: 2
- Part origin: Arbitrary
- A = 2.125
- B = 1.25
- Material: Alloy Steel
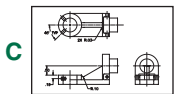
What is the overall mass of the part in pounds?
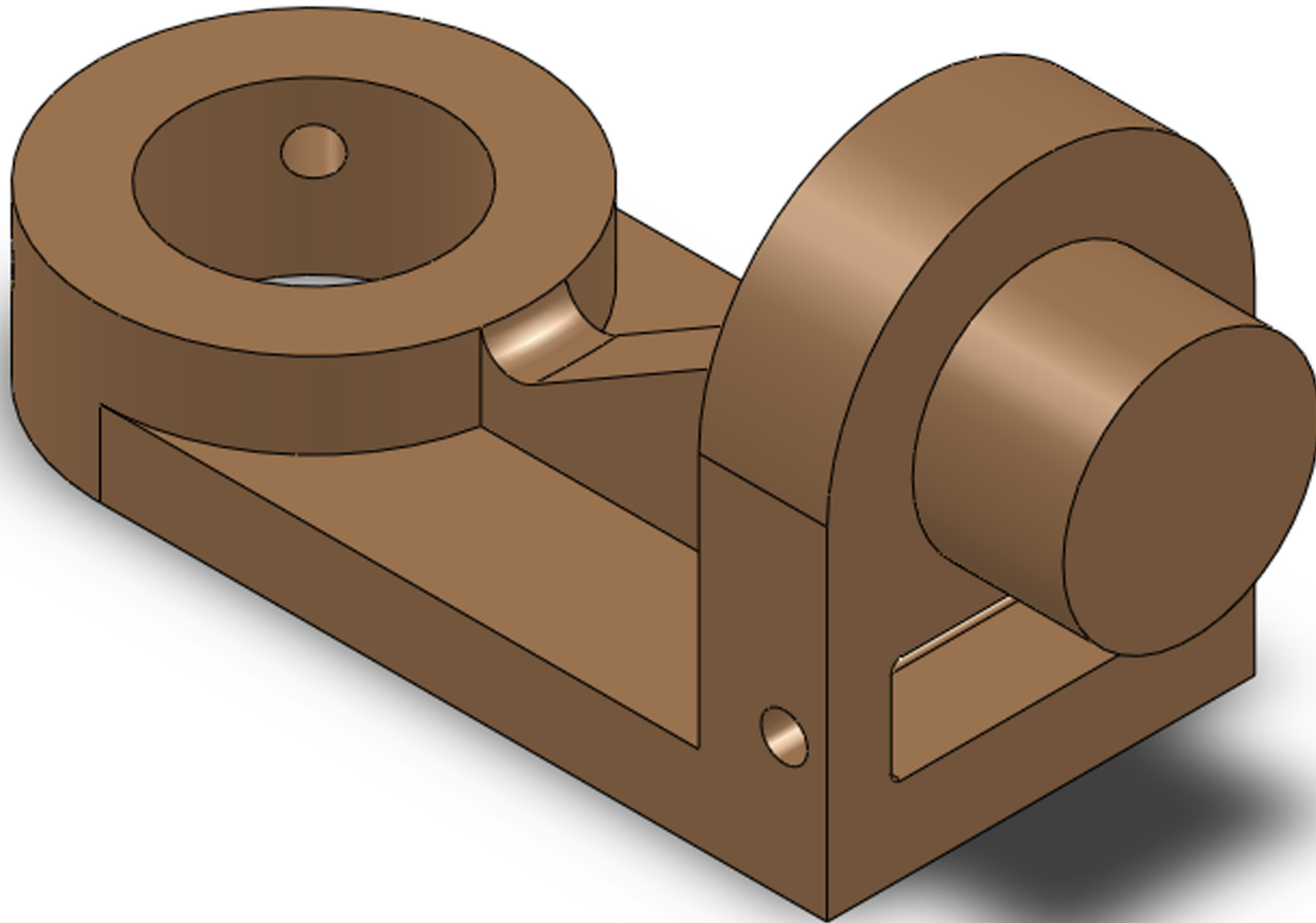
A. 0.20

B. 0.47

C. 0.98

D. 1.23
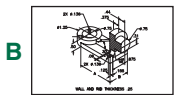
Practice Question 2A

Practice Question 2B

2X ⌀.136

⌀1.25

2X ⌀.136

⌀.75

.44

.375

⌀.75

.31

.50

.06

30°

R.03 TYP

.875

.125

.188

A

B
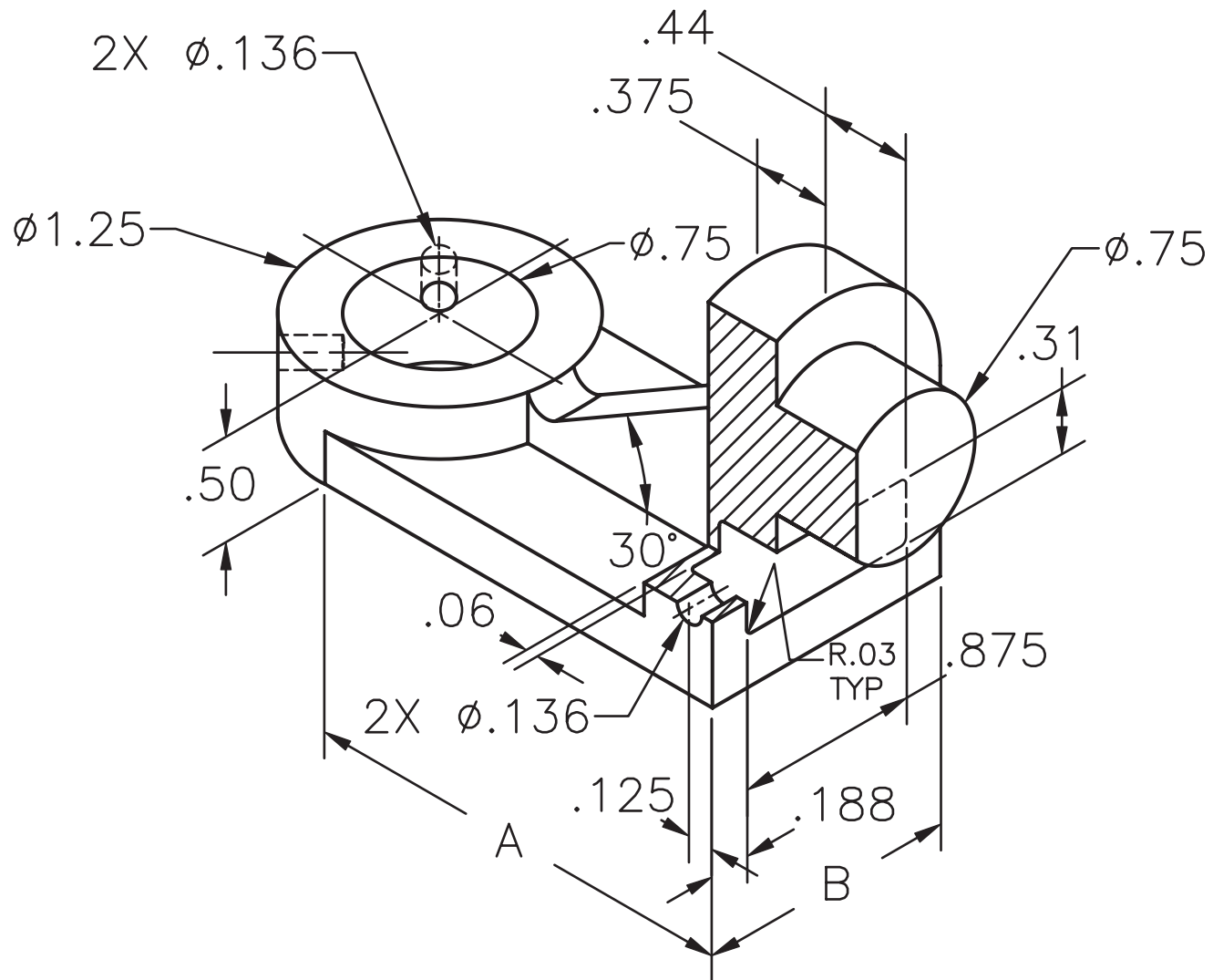
WALL AND RIB THICKNESS .25

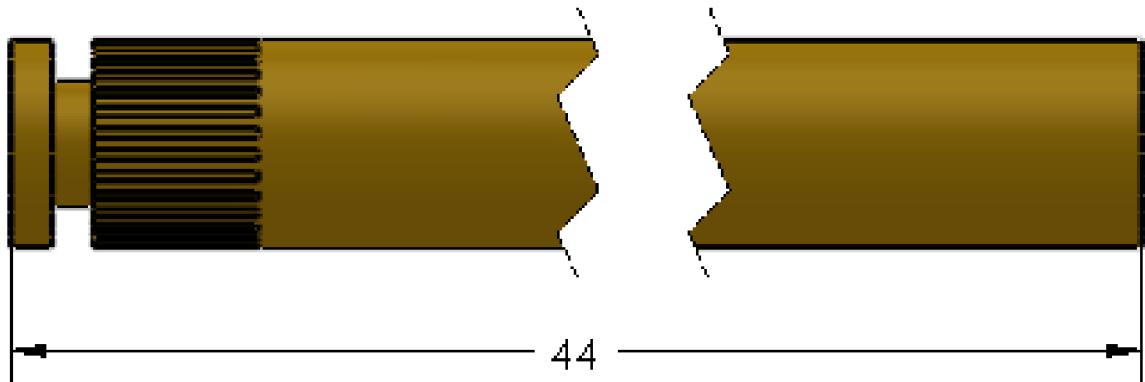# Practice Question 2C

45° TYP

2X R.03

.50

.19

R.10
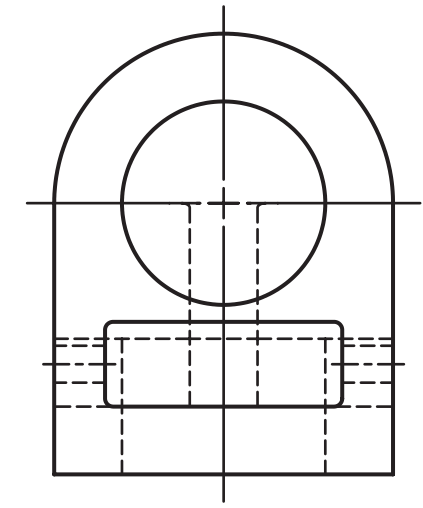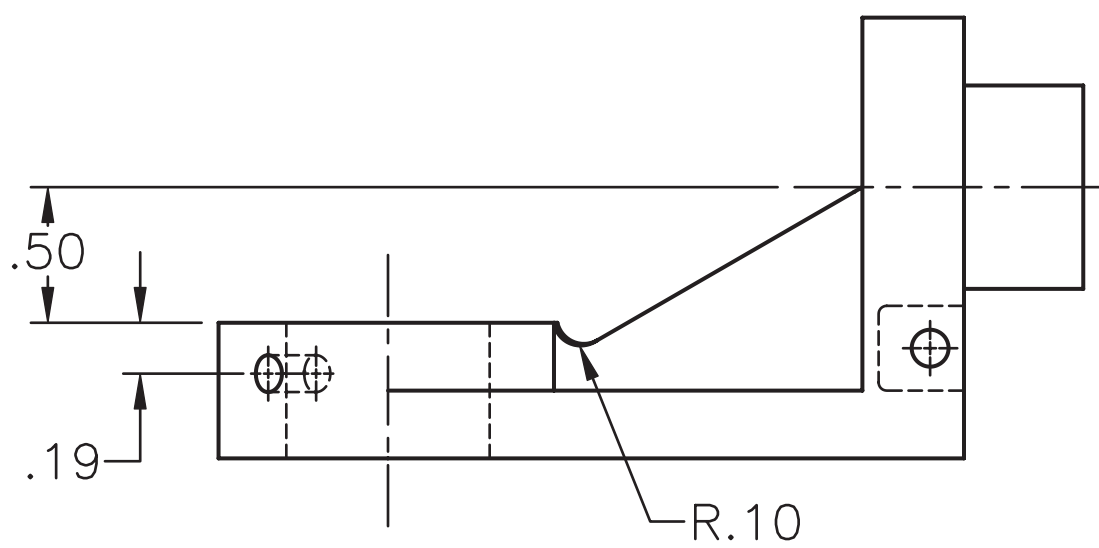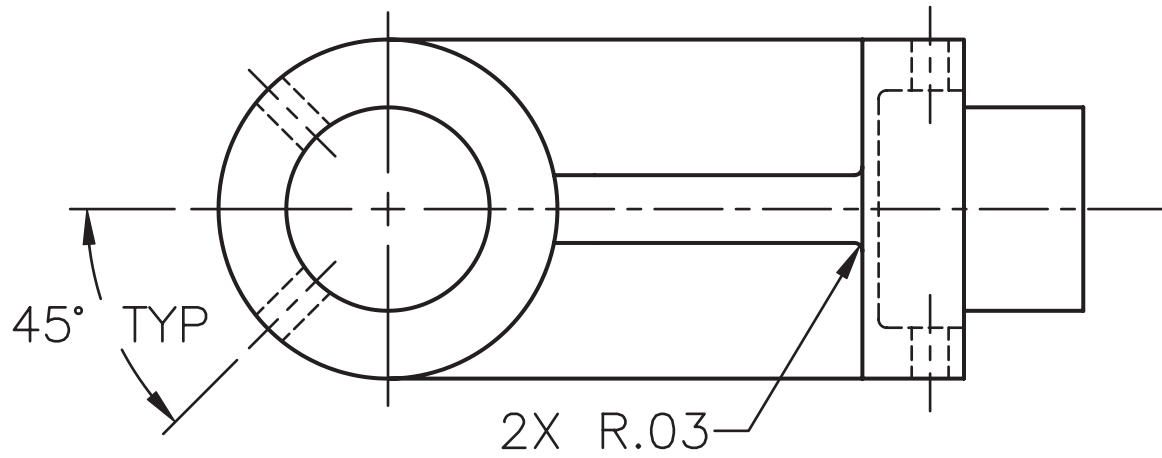
Practice Question 3.

Basic Modeling Theory and Drawing Theory

The drawing view shown is an example of which SolidWorks view type?

A. detail

B. aligned section

C. broken

D. broken-out section

Advanced Modeling Theory and Analysis

To define fixtures in a SimulationXpress study, model _____ are selected.

A. faces

B. edges

C. vertices

D. edges or vertices

Practice Question 5.

A

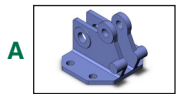Please click
to enlarge

B

Please click
to enlarge

Advanced Part Modeling

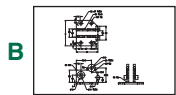Model the part shown in the figures provided. Use the following information.

- Unit system: MMGS (millimeter, gram, second)
- Decimal places: 2
- Part origin: Arbitrary
- A = 66
- B = 56
- Material: Cast Carbon Steel

What is the overall mass of the part in grams?
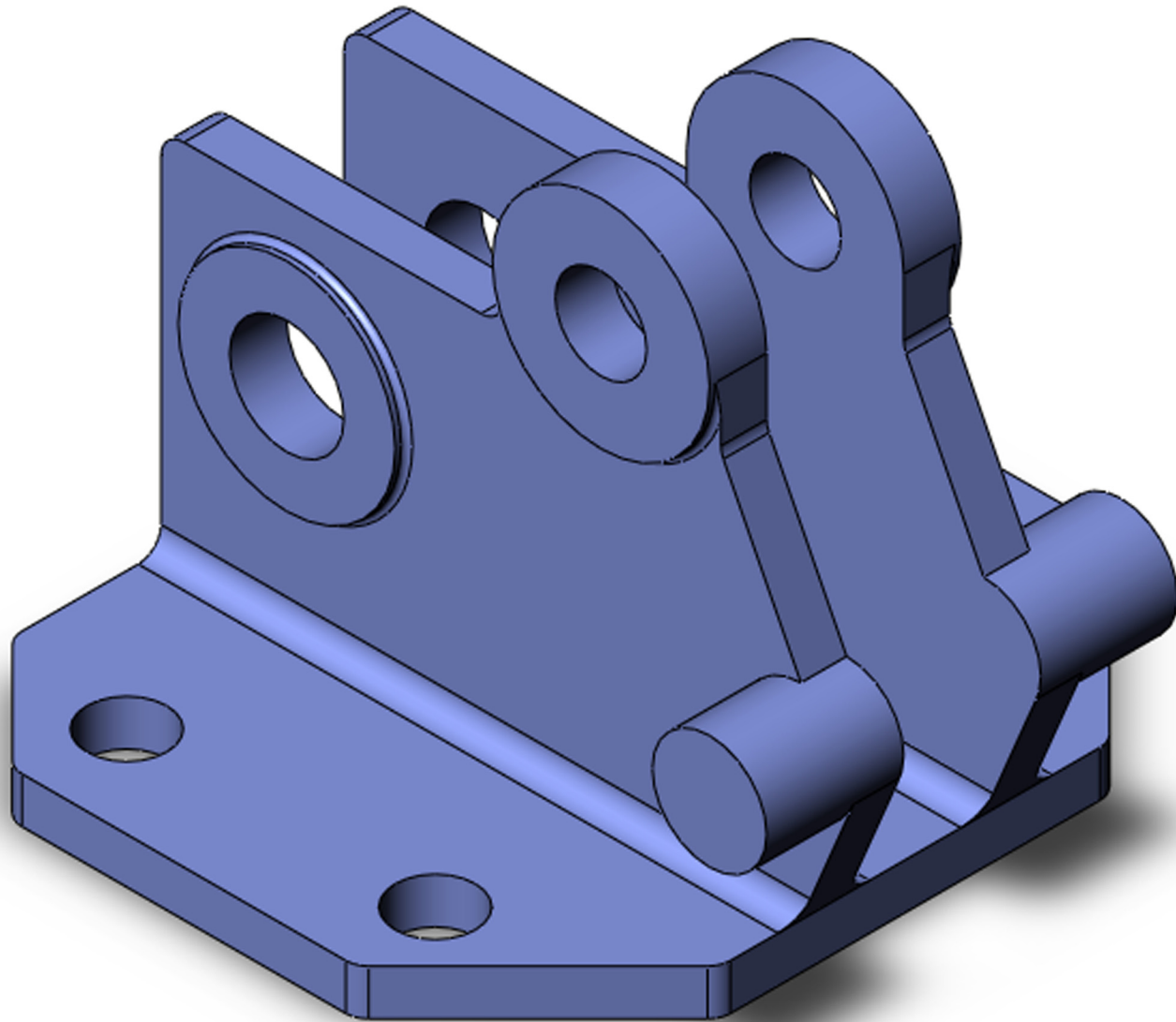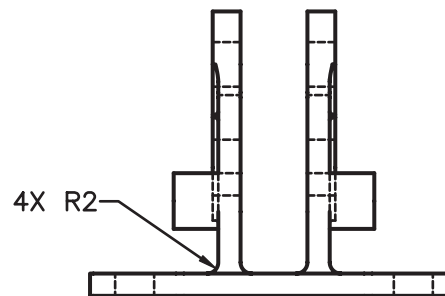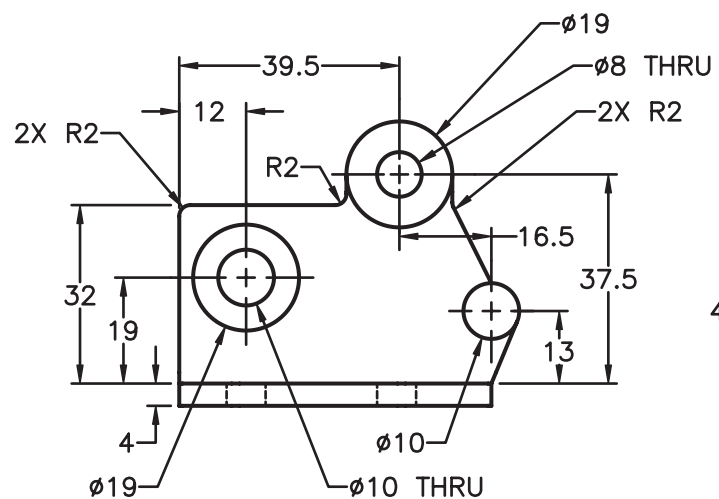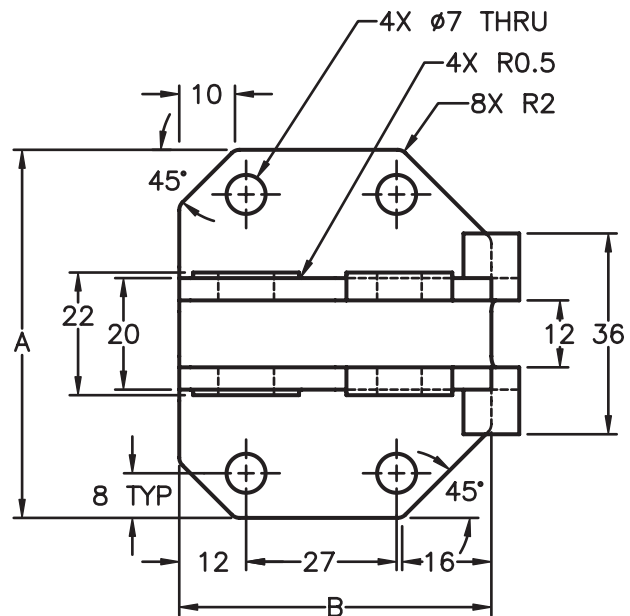
A. 205.19

B. 237.10

C. 305.66

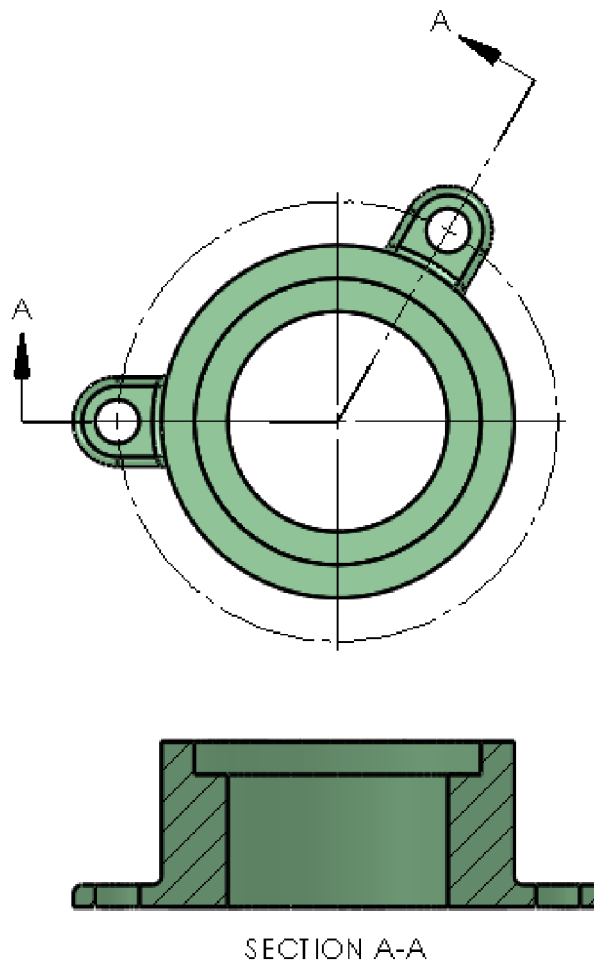D. 442.33

Practice Question 5A

Practice Question 5B

Practice Question 6.

Basic Modeling Theory and Drawing Theory

The drawing view shown is an example of which SolidWorks view type?

A. auxiliary

B. detail

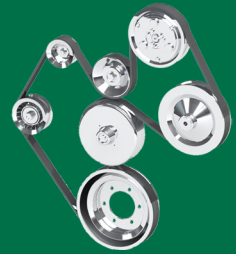C. broken-out section

D. aligned section

SECTION A-A

Practice Question 7.

Advanced Modeling Theory and Analysis

Which of the following types of models can be analyzed with SimulationXpress?

A. single-body parts

B. single-body parts and assemblies

C. single-body parts and surfaces

D. surfaces and assemblies

Practice Question 8.

A

Please click to enlarge

B

Please click to enlarge

C

Please click to enlarge

D

Please click to enlarge

E

Please click to enlarge

F

Please click to enlarge
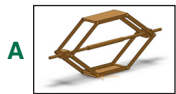
G

Please click to enlarge

Assembly Modeling

Model the assembly shown in the figures provided. Use the following information. The assembly is a scissors lift containing seven components: Lower Base, Upper Base, Link, Pivot, Short Pin, Long Pin, and Shaft. There are two short pins, two long pins, two pivots, and eight links in the assembly.
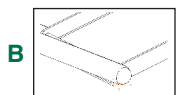
- Unit system: IPS (inch, pound, second)
- Assembly origin: As shown
- Decimal places: 2
- A = 20.50
- B = 6.50
- C = 36°
- Material: AISI 1020 for all components.
- Each base has .025" internal radii.
- The shaft is centered in the assembly horizontally (from left to right) and vertically (between the lower base and upper base).
- The shaft fits in the holes in the pivot (no clearance).
- The pins fit in the holes at the ends of the links and each base (no clearance).
- All links are oriented at the same angle (Angle C).
- All holes are "through" holes.

What is the center of mass of the assembly with respect to the illustrated coordinate system?
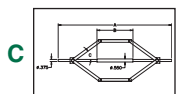
A. X = –1.35, Y = 3.00, Z = 4.25

B. X = –1.35, Y = 3.00, Z = 3.75

C. X = 1.35, Y = 3.00, Z = 3.75

D. X = 1.35, Y = 3.00, Z = 4.25

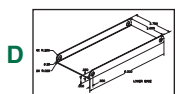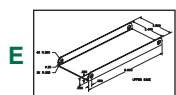# Practice Question 8A

Coordinate System1
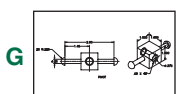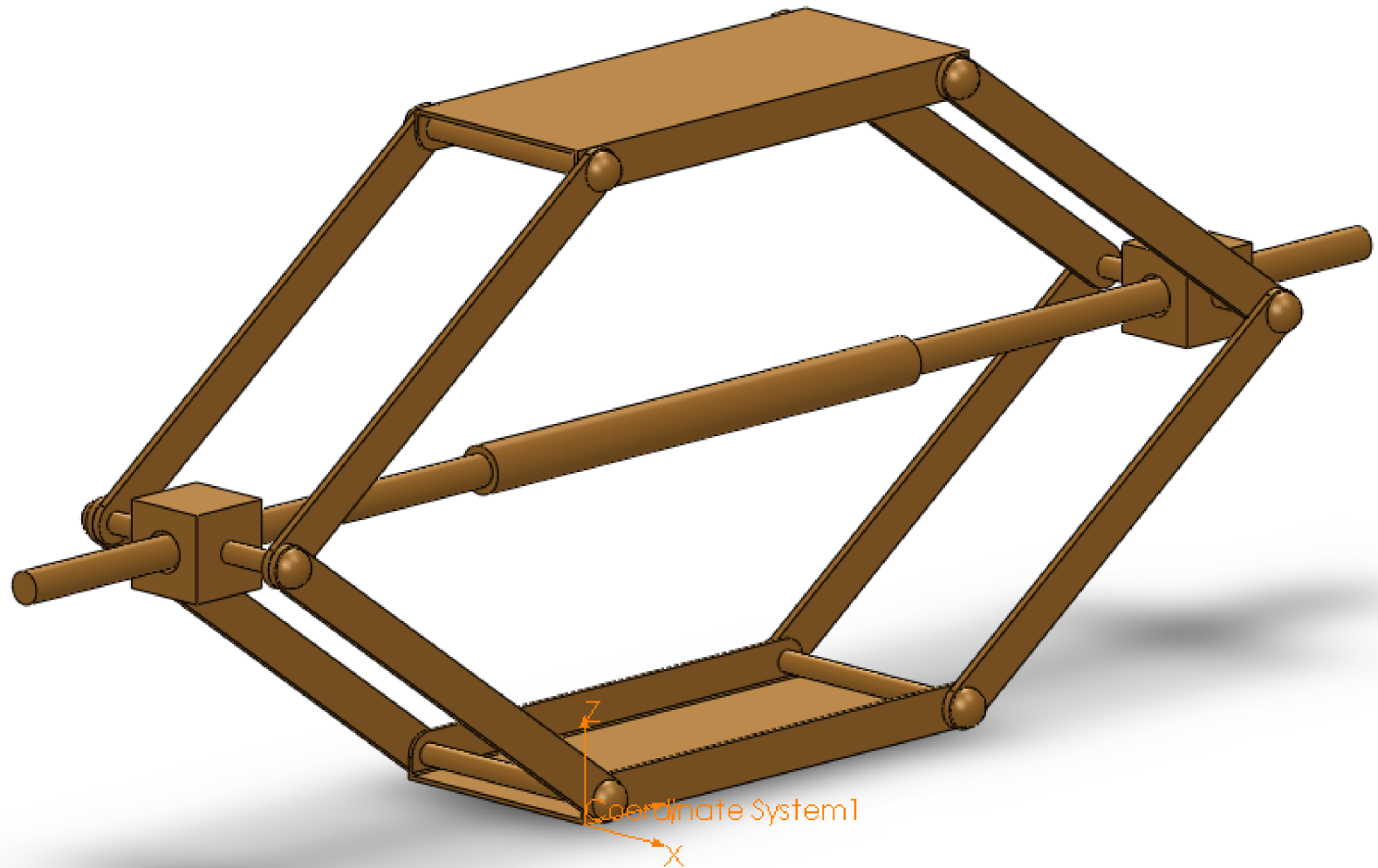
Practice Question 8B

Coordinate System1
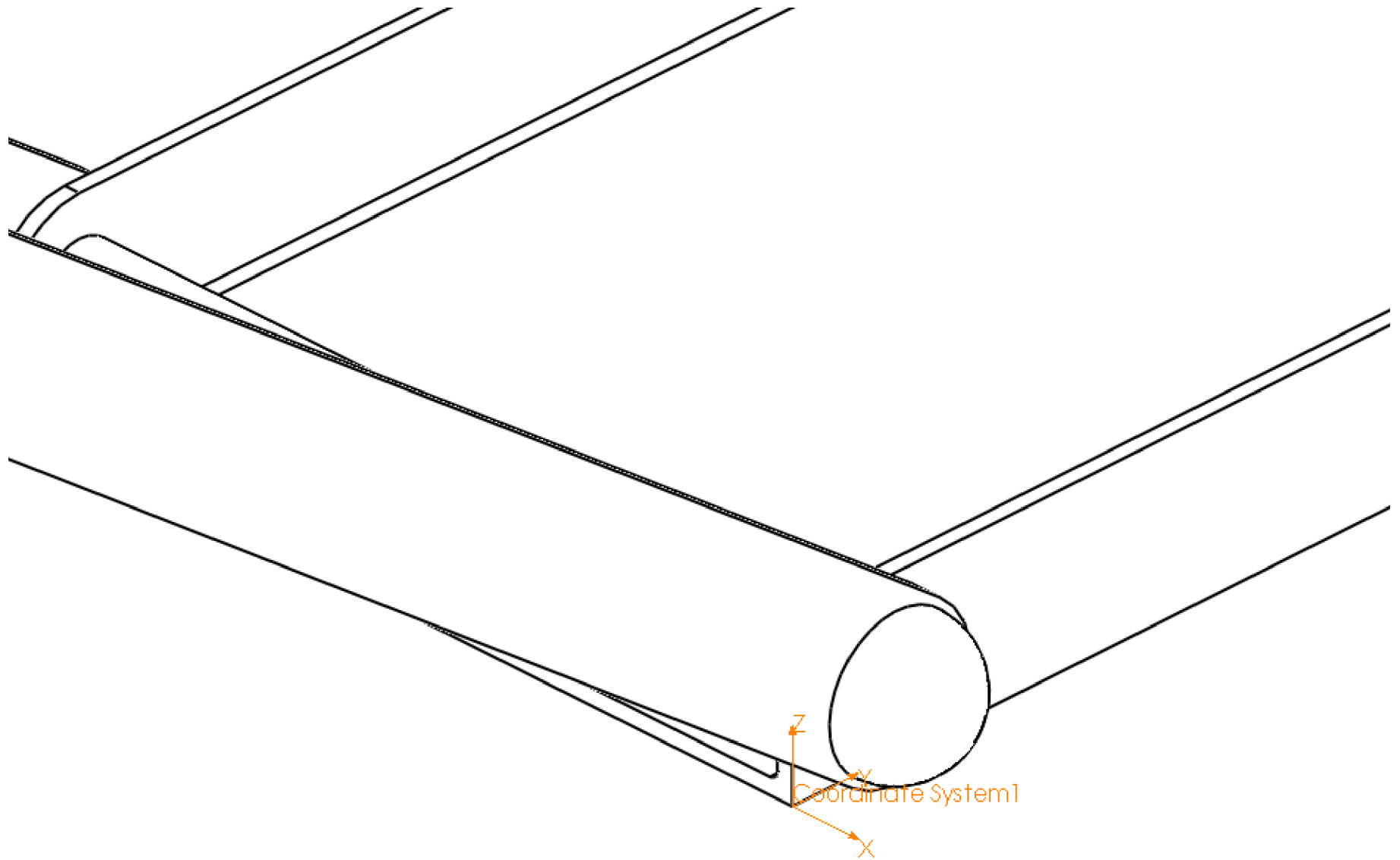
Practice Question 8C

Practice Question 8D

4X R.250

ø.25

2X R.025

2.700

2.600

.250

.500

.250

6.000

LOWER BASE

Practice Question 8E

2.500

2.400

4X R.250

ø.25

2X R.025

.250

.250

6.000

.500

UPPER BASE

Practice Question 8F

2X R.225   2.90   ∅.25

LONG PIN

2X R.250

2X R.225   2.70   ∅.25

6.000

SHORT PIN

LINK   .100

2X ∅.250

Practice Question 8G

2.90

1.45

2X R.225

ø.25

PIVOT

1.000 1.000

1.000

ø.375

.05 X 45°
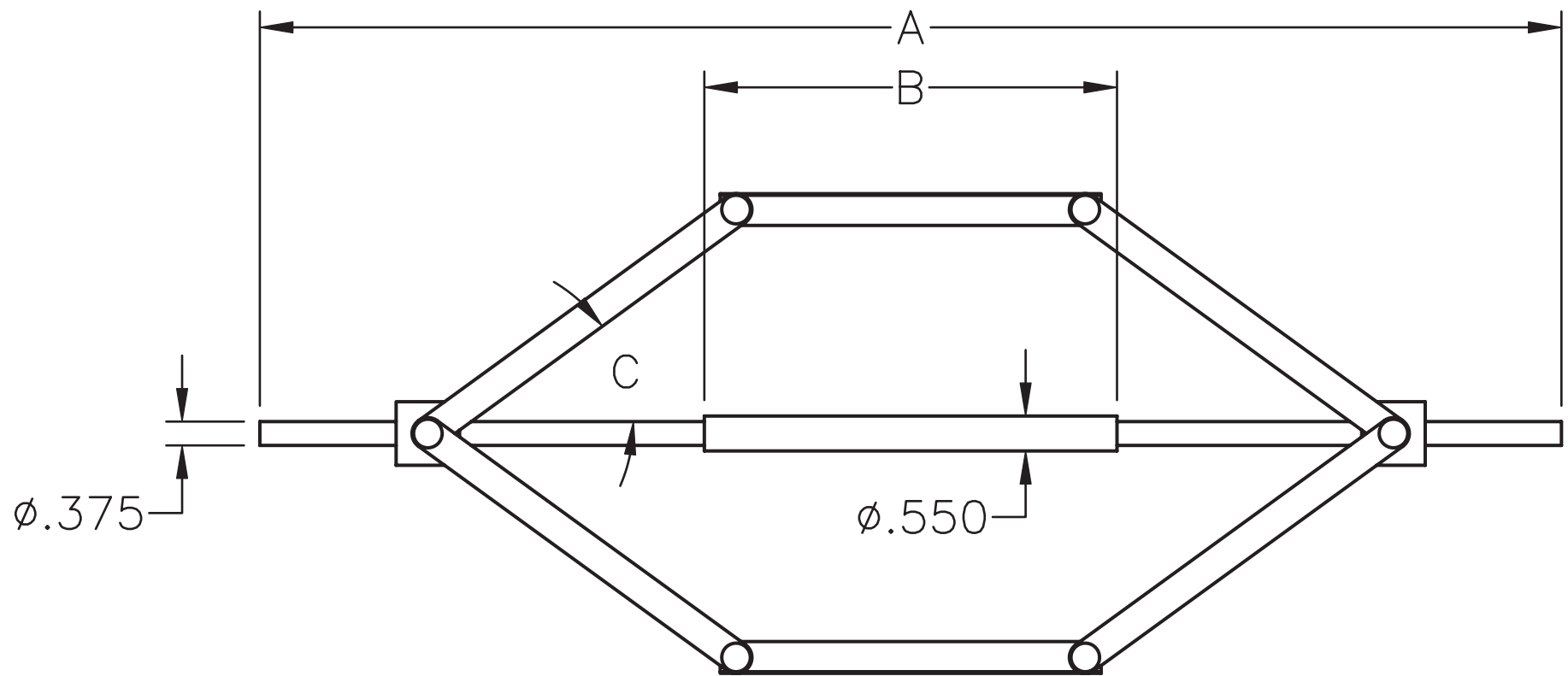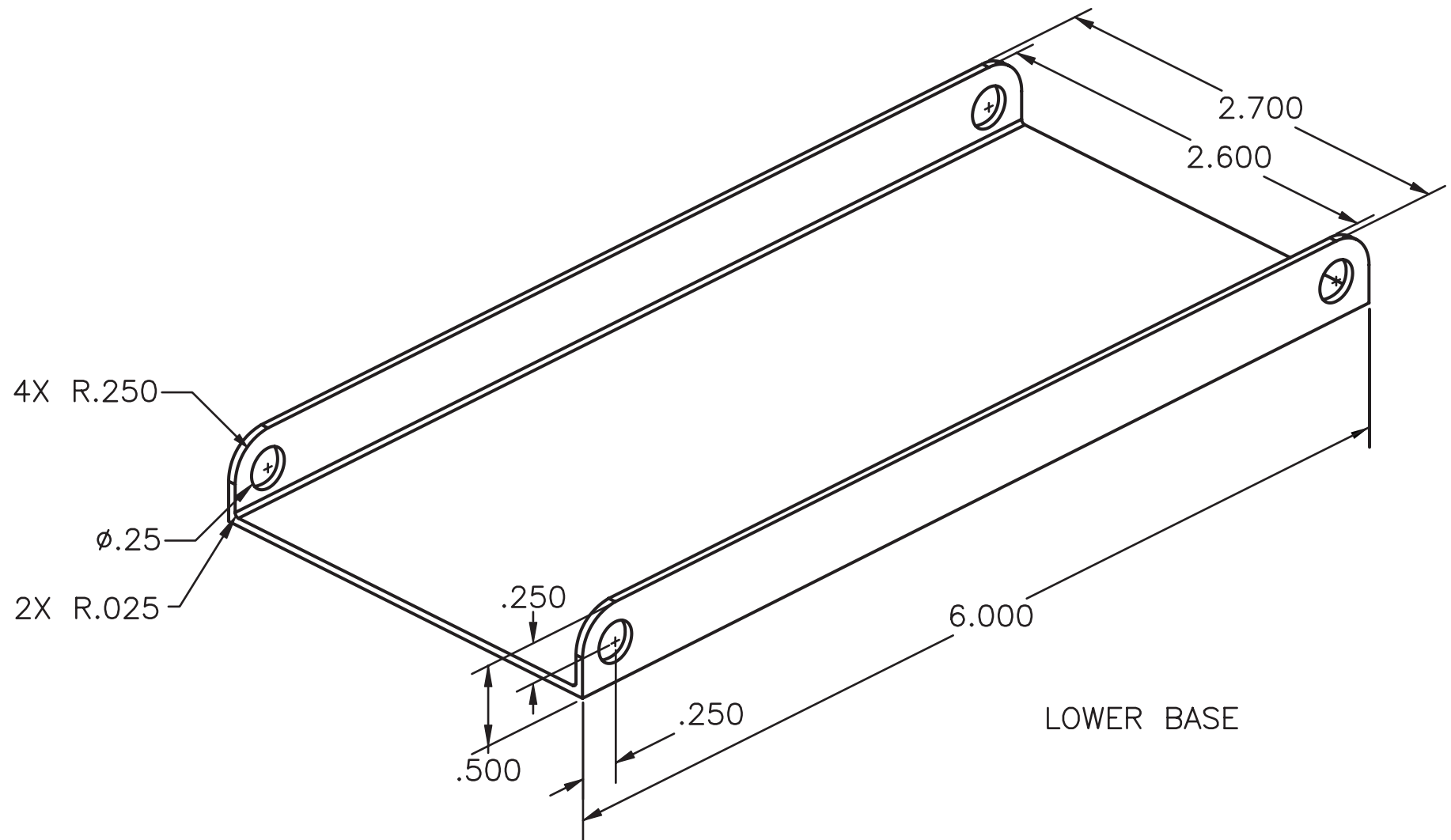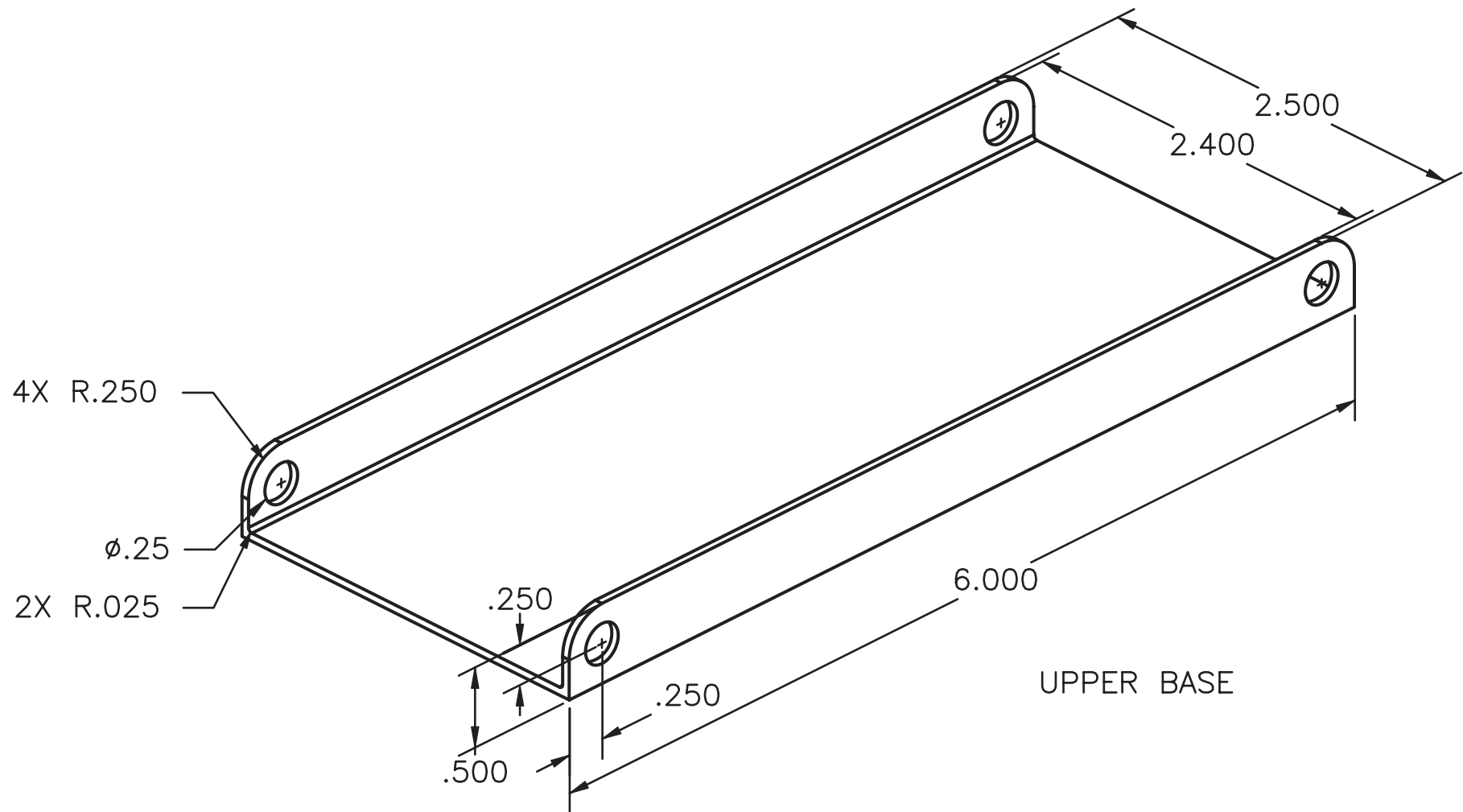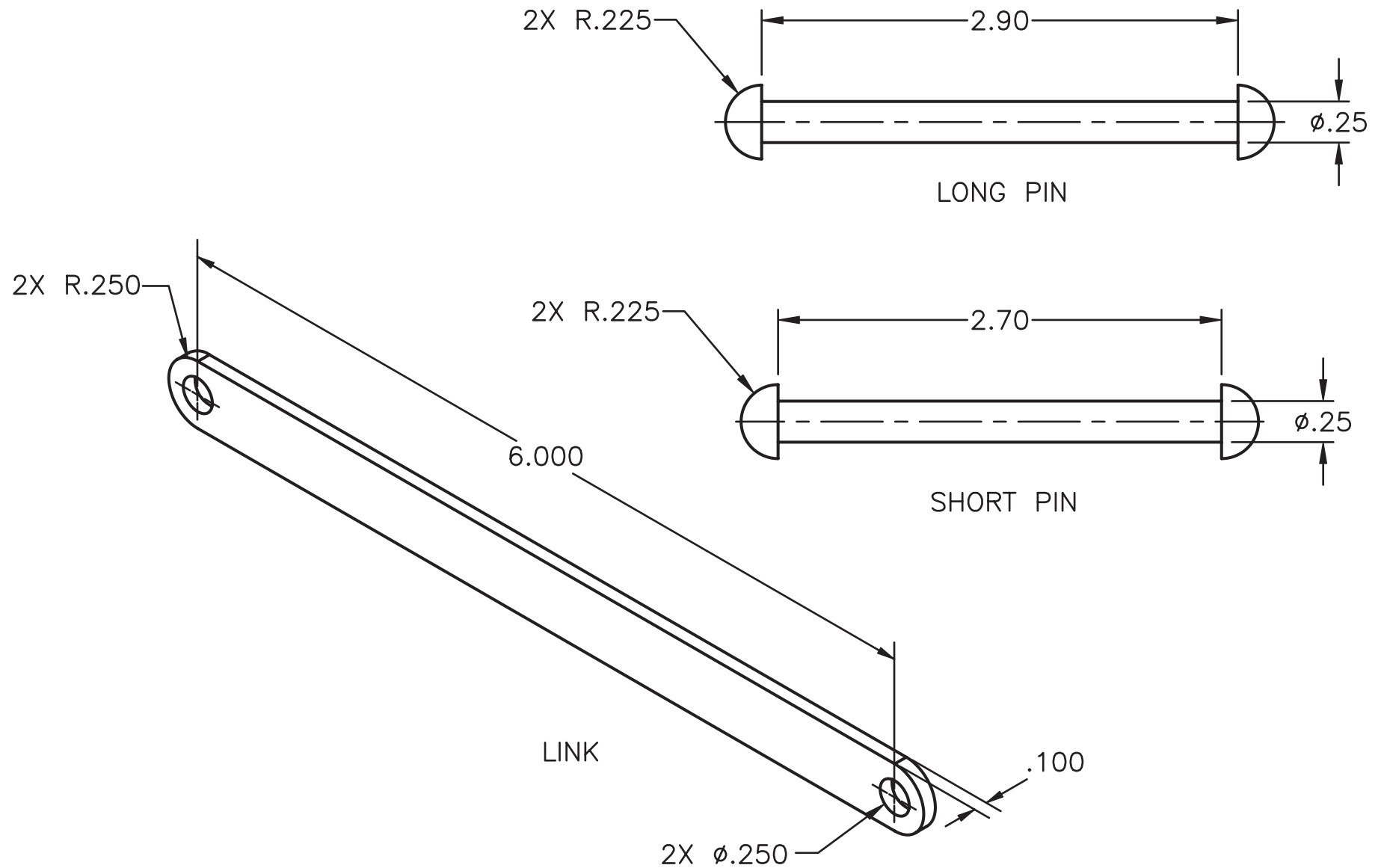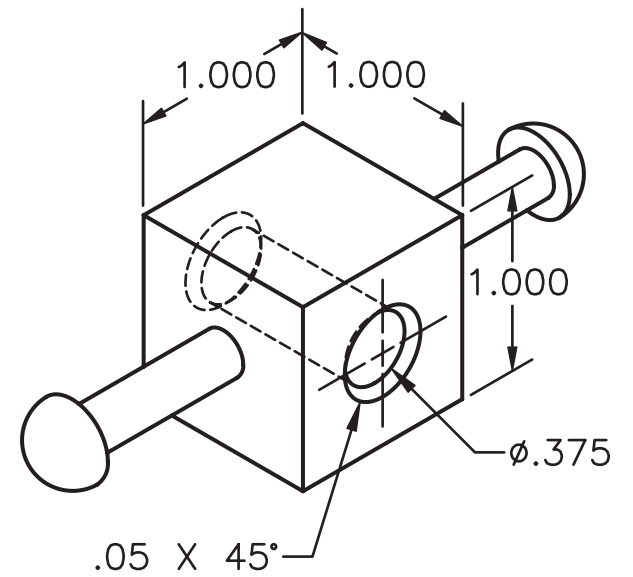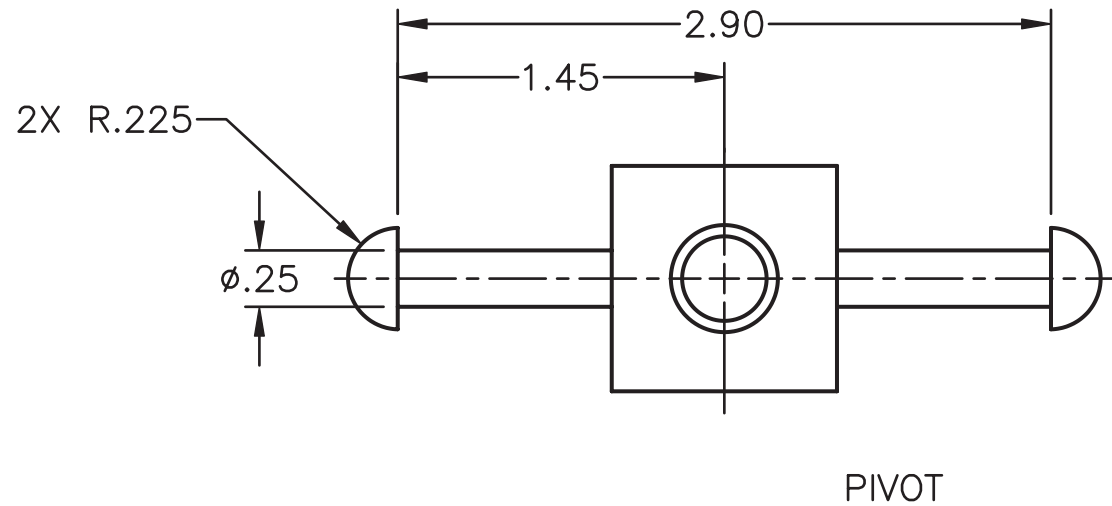
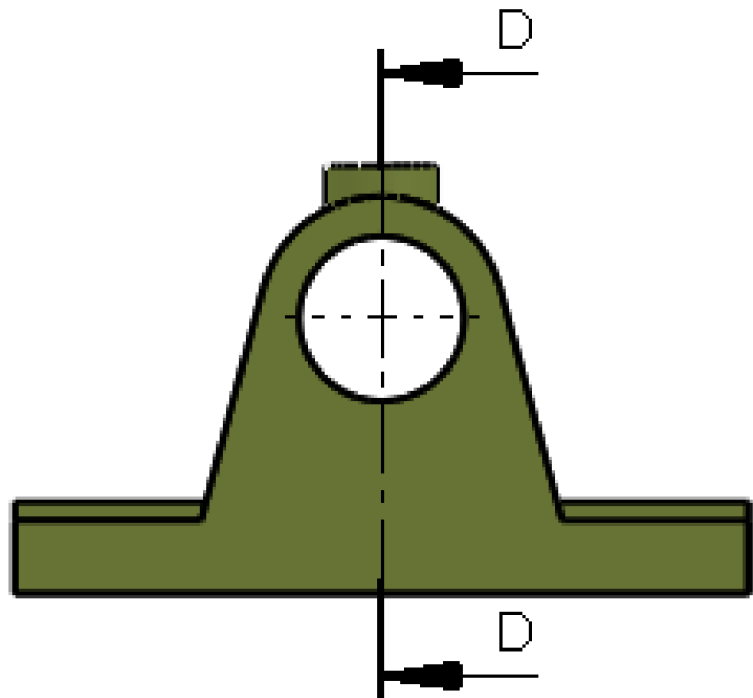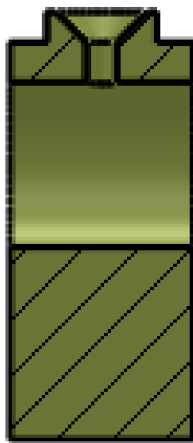## Practice Question 9.

Basic Modeling Theory and Drawing Theory

The drawing view shown is an example of which SolidWorks view type?

A. alternate position
B. aligned section
C. section
D. broken-out section

Practice Question 10.

Advanced Modeling Theory and Analysis

SimulationXpress supports analysis of parts assigned _____ materials.

A. anisotropic
B. isotropic
C. orthotropic
D. All of the above.