

School Name:	Team Number:
Student Names (print):	Total Test Score:
Student Pledge: I pledge to put forth my best effort in the Science Olympiad tournament and to uphold the principles of honest competition. In my events, I will compete with integrity, respect, and sportsmanship towards my fellow competitors. I will display courtesy towards Event Supervisors and Tournament Personnel. My actions will exemplify the proud spirit of my school, team, and state. Signature student 1: _____ Signature student 2: _____	

Engineering CAD

Before the time starts:

- Connect your laptops to the guest wifi. Close all applications on your laptop except a web browser. The only tab you should have open in your browser is Onshape. Login to Onshape.
- Click on your name in the upper right and select My Account from the drop down menu. Add your team number to your Nickname [example: John Doe (B01)], then click Update Profile at the bottom.
- Click the Onshape logo in the upper left to return to the home screen, and then navigate to the Classes section in the left hand menu. One partner should see a class called Virginia State Engineering CAD Session #, and the other partner should see no classes.

When the time starts:

- Once the time begins, an assignment will appear in the class. The partner with access to the class should click on it and then click the blue Start Assignment button.
- Click the blue Share button at the top right, enter your partner's email, and then click Share.
- The partner who did not have access to the class should go to the Shared With Me section in the left hand menu and open the file your partner just shared with you.
- Now you are both editing the same document!

During the event time:

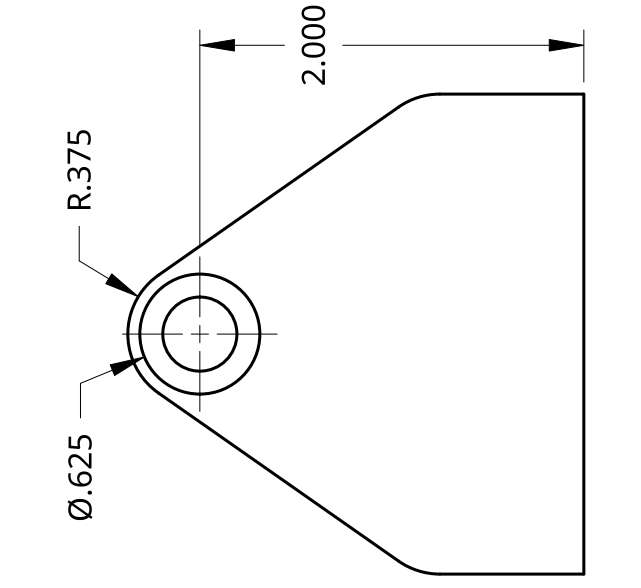
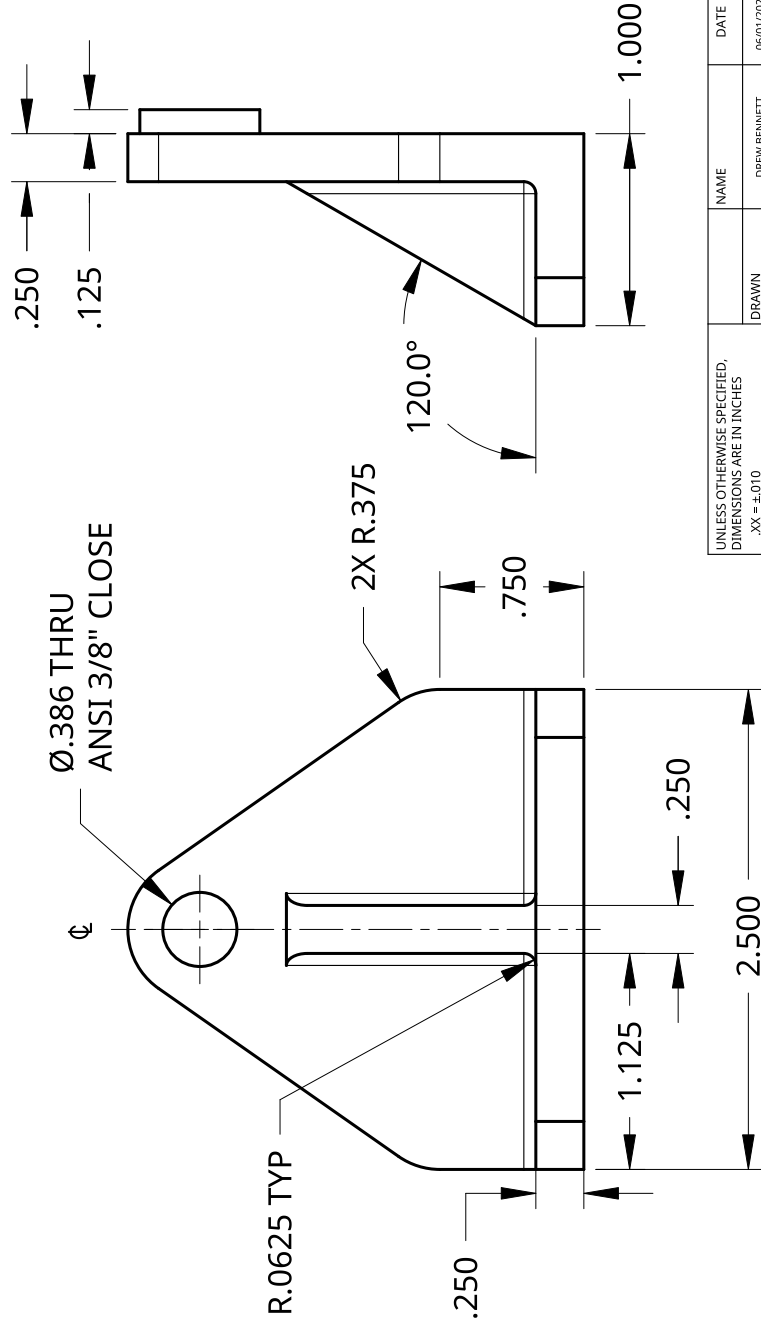
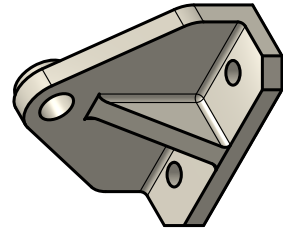
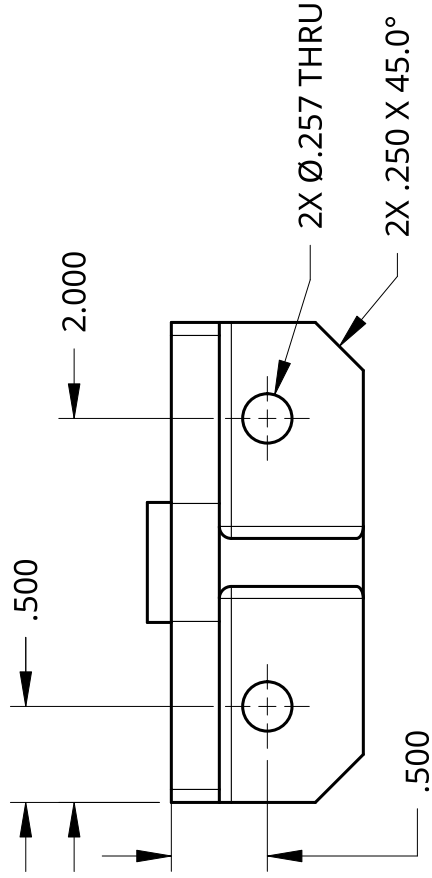
- You may separate and write on these pages.
- The assembly contains four components. Two are already done for you, but you must model the other two.
- You must model each part in the tab with the matching name. Do not rename the tabs.
- You must assign a material to each part in order to get a score for it.
- Keep in mind that time is the tiebreaker.

Finishing the event:

- Click the blue Submit button at the top of the screen, then logout of Onshape.
- You will still have access to your submission for some time after the event while we are grading it. Do not attempt to access or modify it, or else you will be reported for cheating.



Sample Test Only

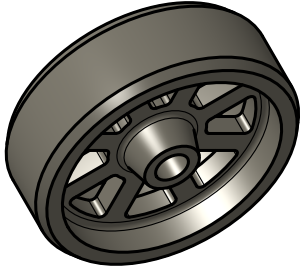


A

A

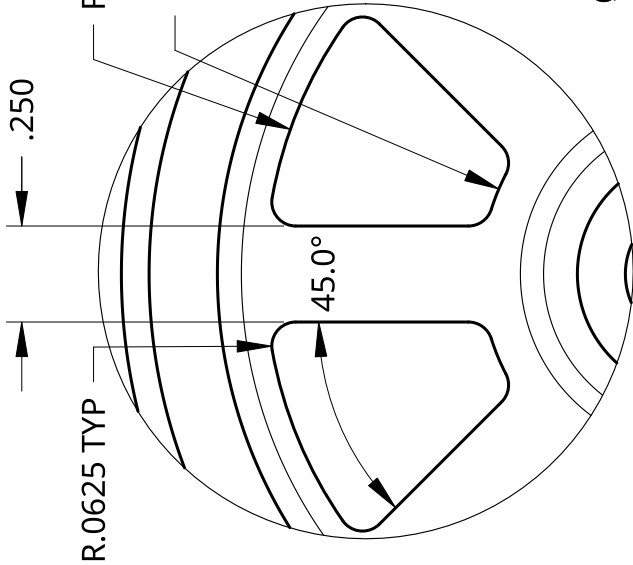
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX" = ±.010 ANGULAR = ±1° XXX" = ±.005 FRACTIONAL = ±1/32 SURFACE FINISH 				NAME		DATE		Caster Side Plate	TITLE	
				DRAWN		DREW BENNETT				06/01/2023
				CHECKED						
				APPROVED						
DO NOT SCALE DRAWING							SIZE	DWG NO.	REV.	
BREAK ALL SHARP EDGES AND REMOVE BURRS							A			
THIRD ANGLE PROJECTION							CAD Example 1			
				MATERIAL		FINISH	SCALE	WEIGHT	SHEET	
				Aluminum 6061			1:1		1 of 1	

SCALE 1:2

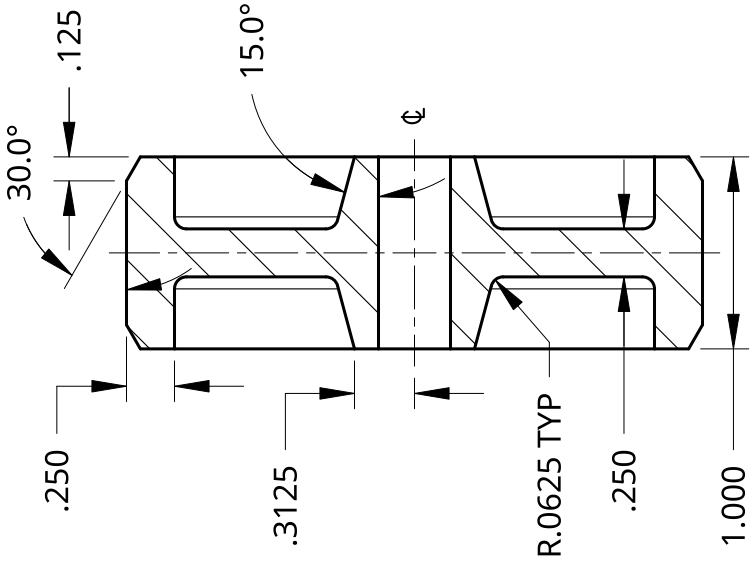
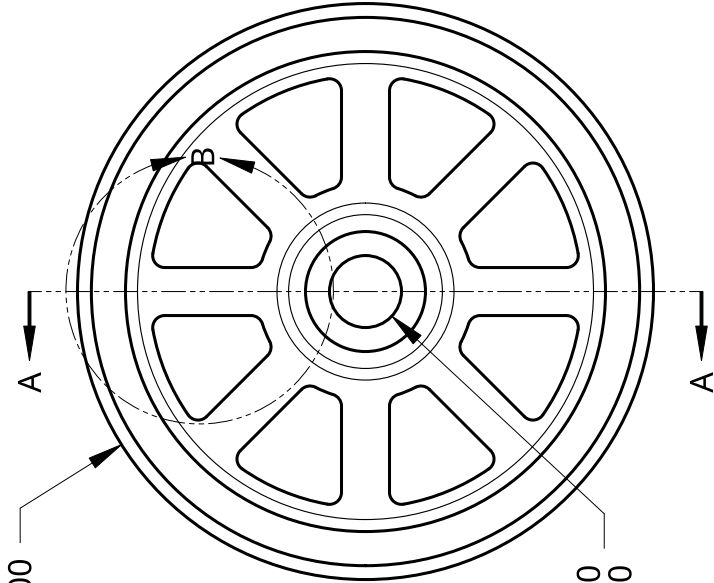


B

B



DETAIL B
SCALE 2:1

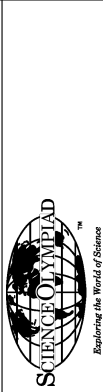


A

A

SECTION A - A

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.010 .XXX = ±.005 .XXXX = ±.0005 SURFACE FINISH	DRAWN	NAME	DATE
	CHECKED	DREW BENNETT	06/01/2023
	APPROVED		
DO NOT SCALE DRAWING			
BREAK ALL SHARP EDGES AND REMOVE BURRS			
THIRD ANGLE PROJECTION	MATERIAL	FINISH	
	Carbon Steel		



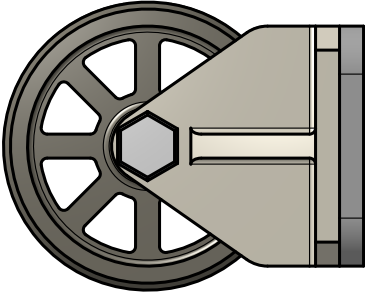
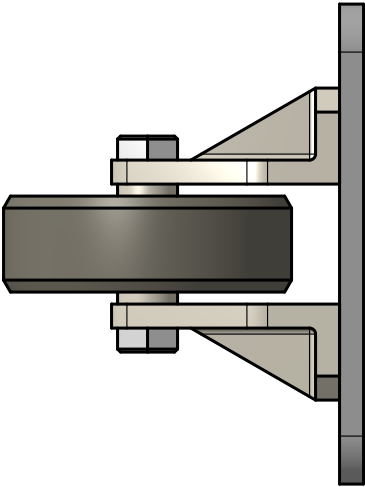
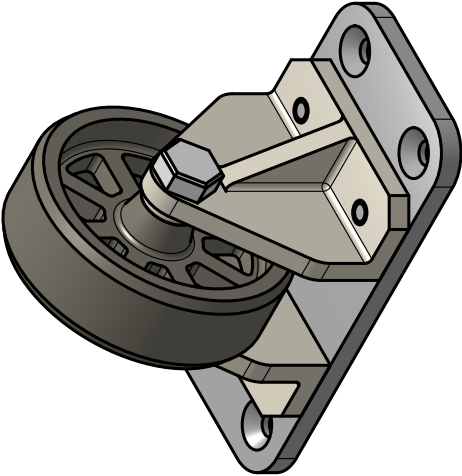
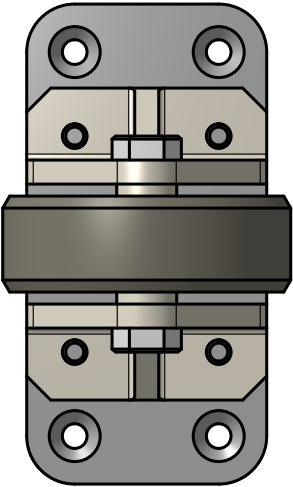
TITLE			
Caster Wheel			
SIZE	DWG NO.	REV.	
A			
SCALE	1:1	WEIGHT	1 of 1

2

1

B

B



A

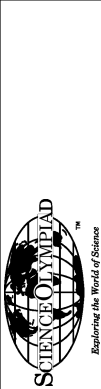
A

2

1

UNLESS OTHERWISE SPECIFIED,
DIMENSIONS ARE IN INCHES
.XX = ±.010 ANGULAR = ±1°
.XXX = ±.005 FRACTIONAL = ±1/32
.XXXX = ±.0005
SURFACE FINISH

DRAWN	NAME	DATE
CHECKED	DREW BENNETT	06/01/2023
APPROVED		



TITLE			Caster Wheel Assembly	
DO NOT SCALE DRAWING			SIZE	REV.
BREAK ALL SHARP EDGES AND REMOVE BURRS			A	CAD Example 2
THIRD ANGLE PROJECTION	MATERIAL	FINISH	SCALE	WEIGHT
	Carbon Steel		1:2	1 of 3

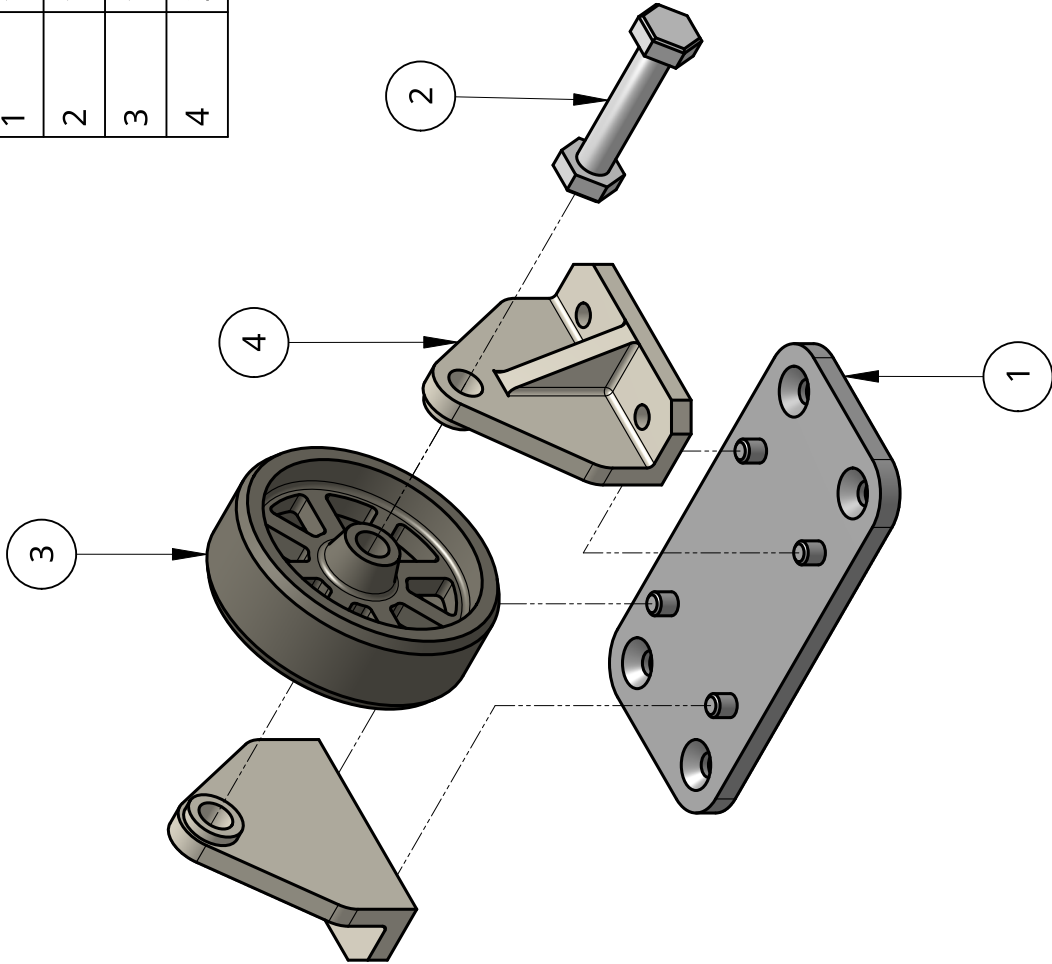
1

2

Item	Quantity	Name	Description
1	1	Base Plate	Provided
2	1	Caster Axle	Provided
3	1	Caster Wheel	User-Created
4	2	Caster Side Plate	User-Created

B

B



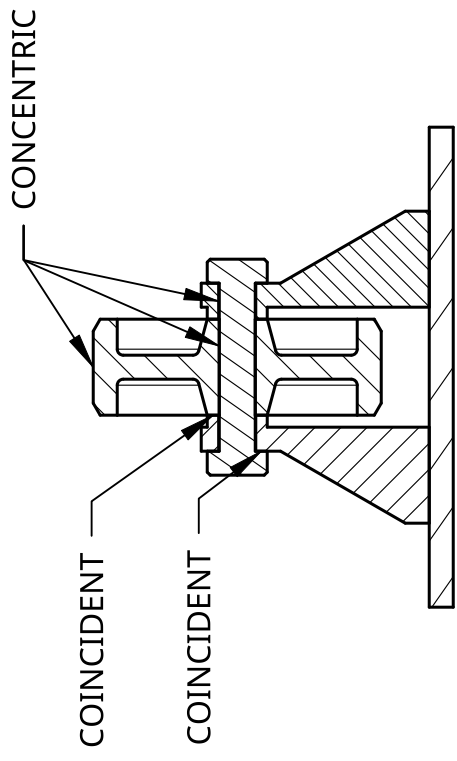
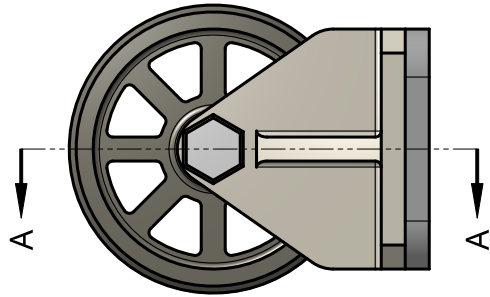
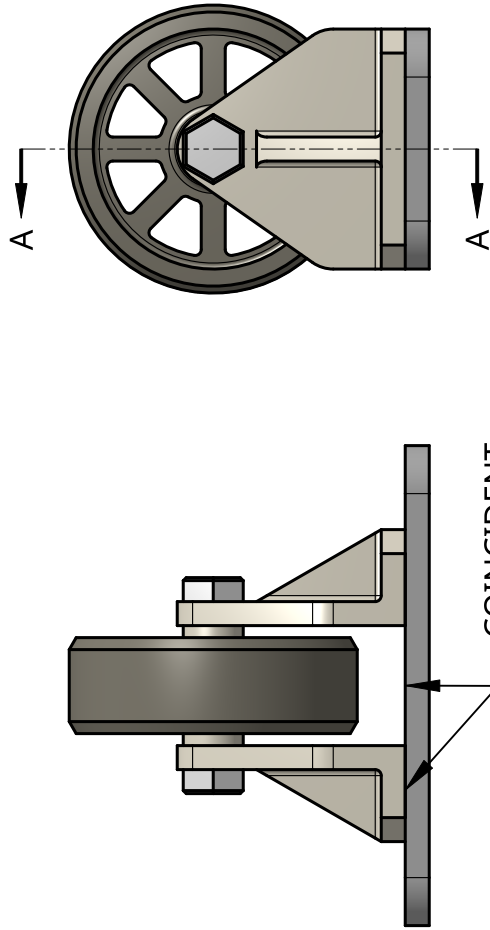
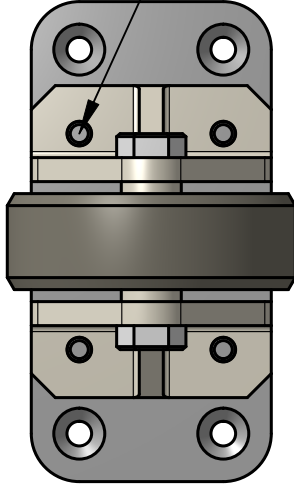
A

A

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.010 .XXX = ±.005 .XXXX = ±.0005 SURFACE FINISH		DRAWN DREW BENNETT	DATE 06/01/2023		
DO NOT SCALE DRAWING				TITLE Caster Wheel Assembly	
BREAK ALL SHARP EDGES AND REMOVE BURRS				REV.	
THIRD ANGLE PROJECTION		MATERIAL Carbon Steel		FINISH	
		APPROVED		CHECKED	
				SIZE A	
				DWG NO. CAD Example 2	
				SCALE 1:2	
				WEIGHT 2 of 3	

2

1



SECTION A - A

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX # ±.010 ANGULAR = ±1° .XXX # ±.005 FRACTIONAL = ±1/32 .XXXX # ±.0005 SURFACE FINISH √		NAME	DATE				
	DRAWN	DREW BENNETT	06/01/2023				
	CHECKED						
	APPROVED						
	TITLE						
	Caster Wheel Assembly						
DO NOT SCALE DRAWING					SIZE	DWG NO.	REV.
BREAK ALL SHARP EDGES AND REMOVE BURRS					A	CAD Example 3	
THIRD ANGLE PROJECTION	MATERIAL	FINISH		SCALE	WEIGHT	SHEET	3 of 3
							