



# Axel and Wheel Workshop

SME CAD NIGHT 1 - WINTER  
2024

Society of Manufacturing Engineers  
presents:

## CAD Workshops

for **SANDIA Design Competition**

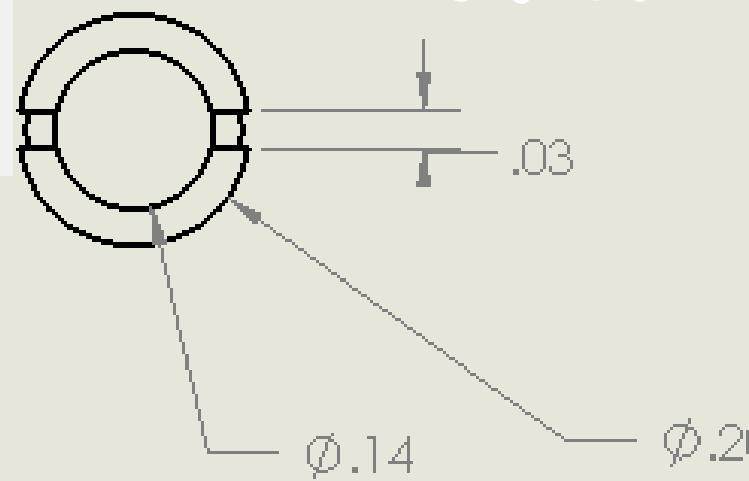
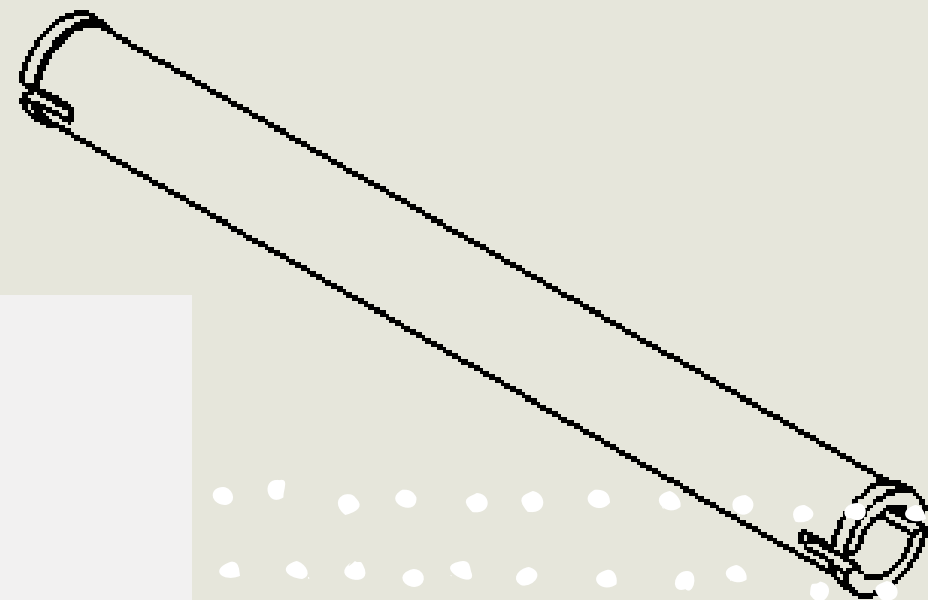
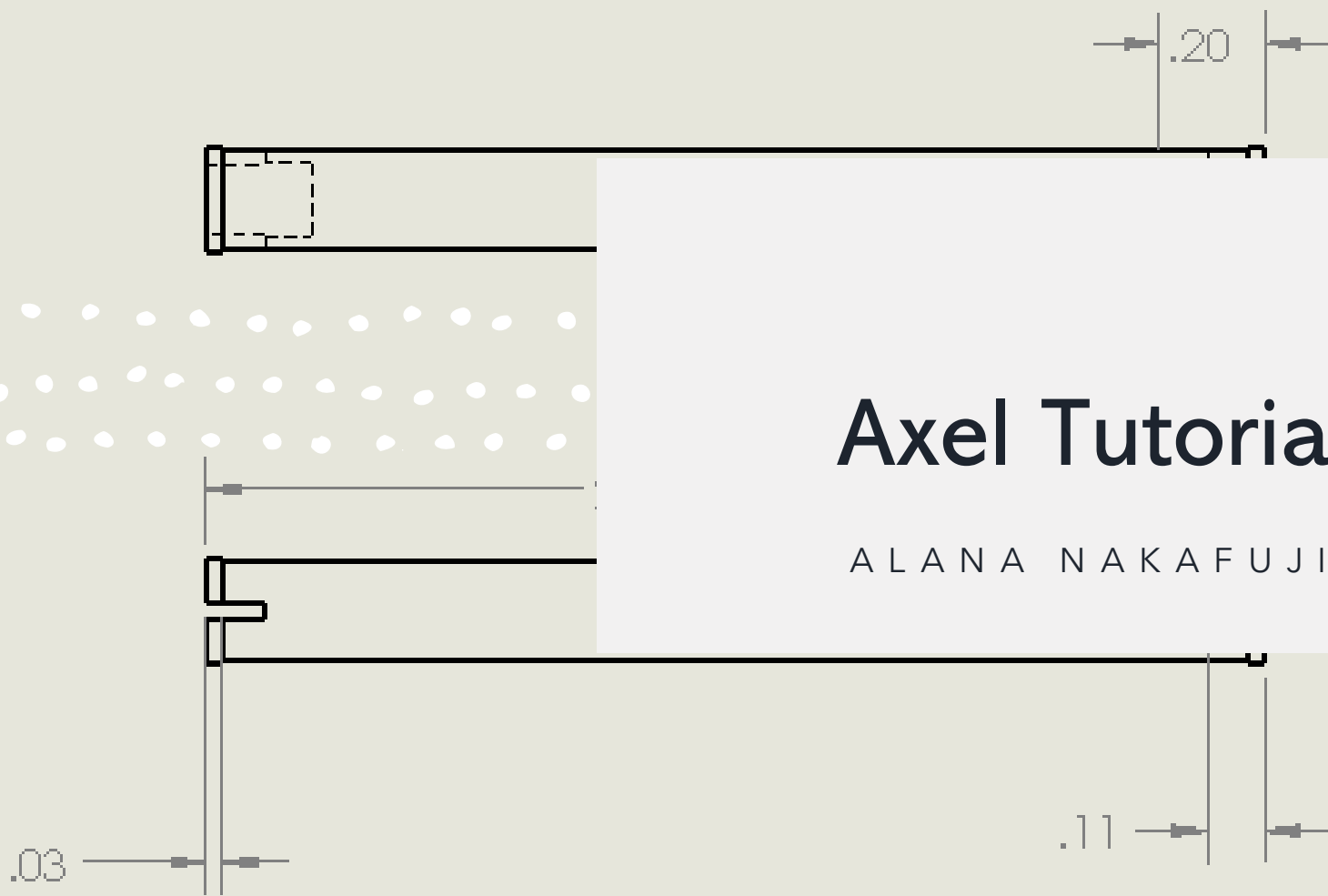
**chassis & s**  
Mon Feb 26th  
6:30  
Kemp

**el & wheels**  
Feb 7th, 2024  
30 PM  
er 1131

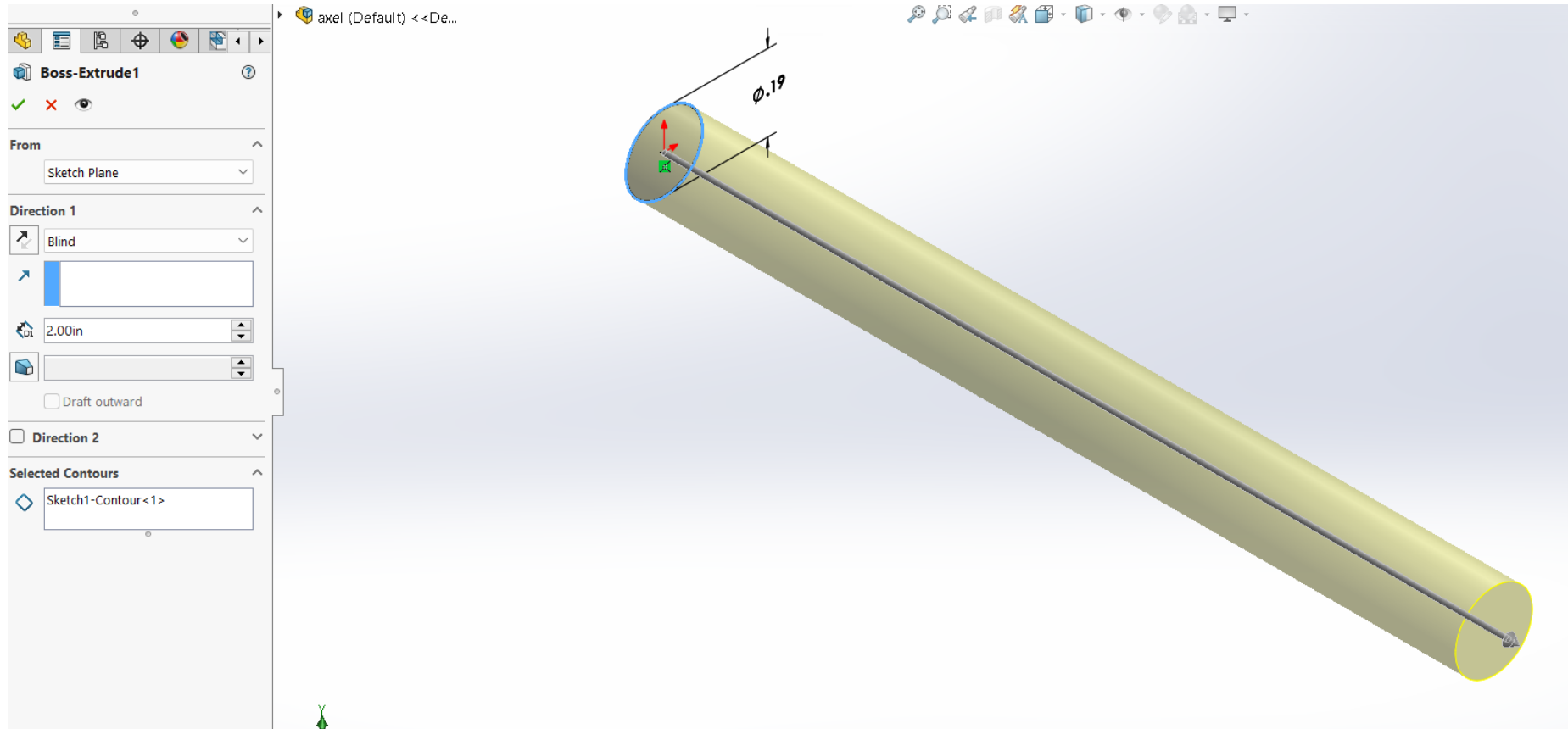
Workshops are open to ev  
even if you are not pla  
compete in the comp

# Axel Tutorial

ALANA NAKAFUJI



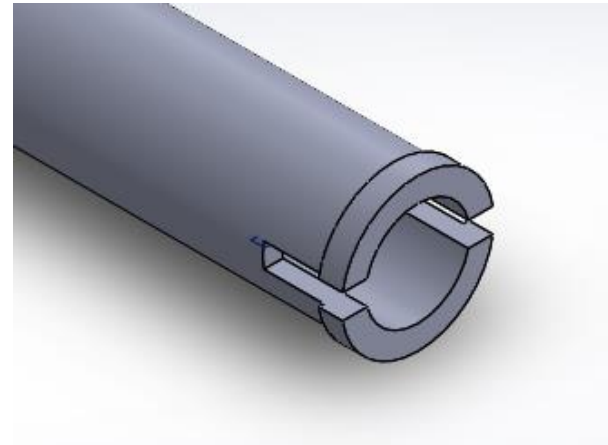
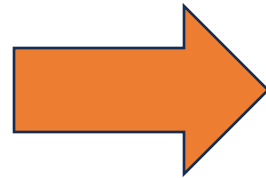
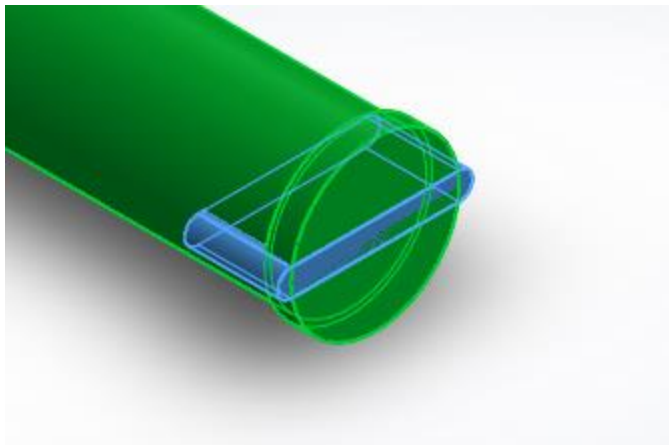
# Helpful Tools for Designing Axel



Boss Extrude – Allows you to Extrude a Sketch

# Helpful Tools for Designing Axel

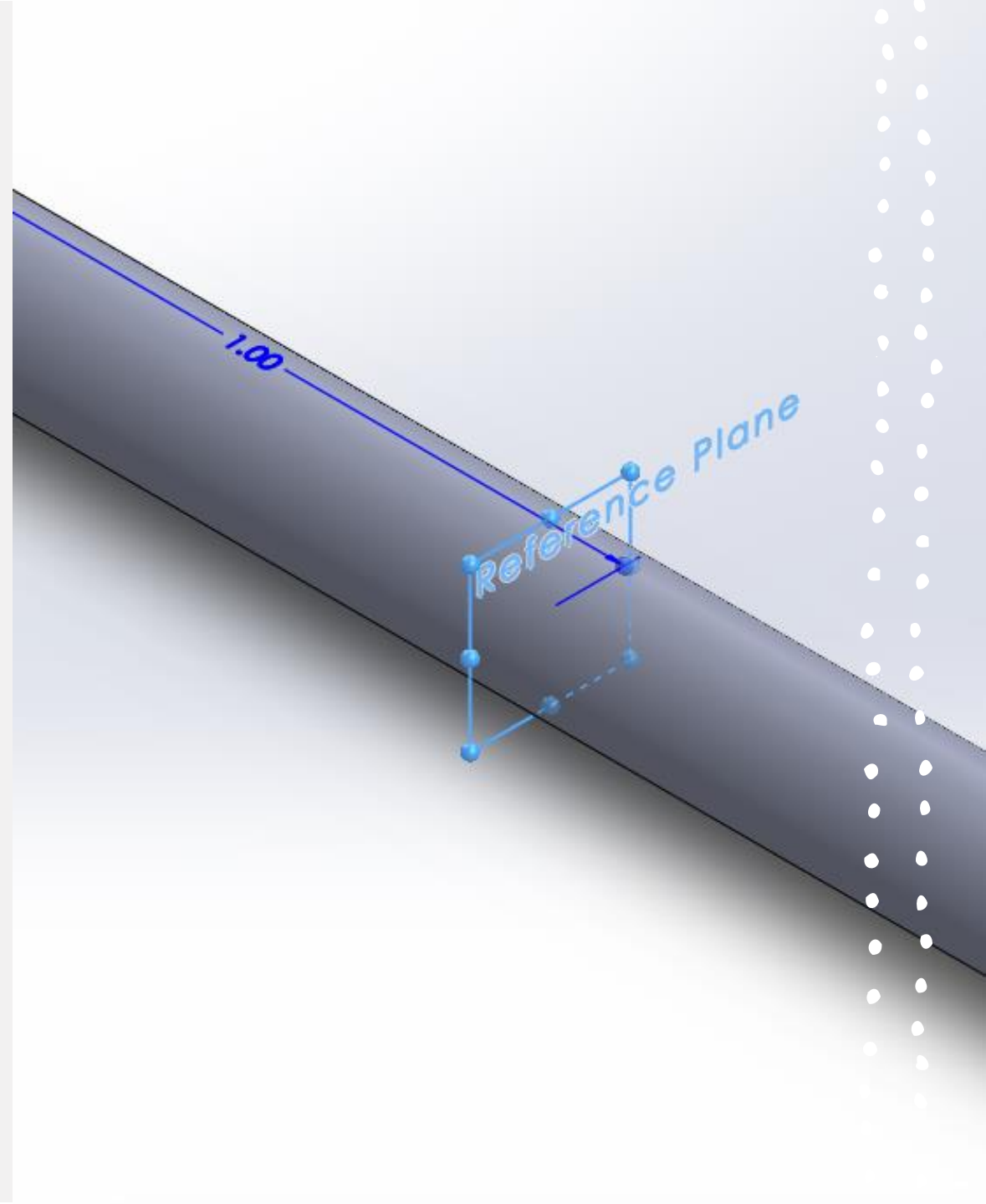
Combine - Allows you combine by adding or subtracting bodies.



**Insert > Features > Combine**

# Helpful Tools for Designing Axel

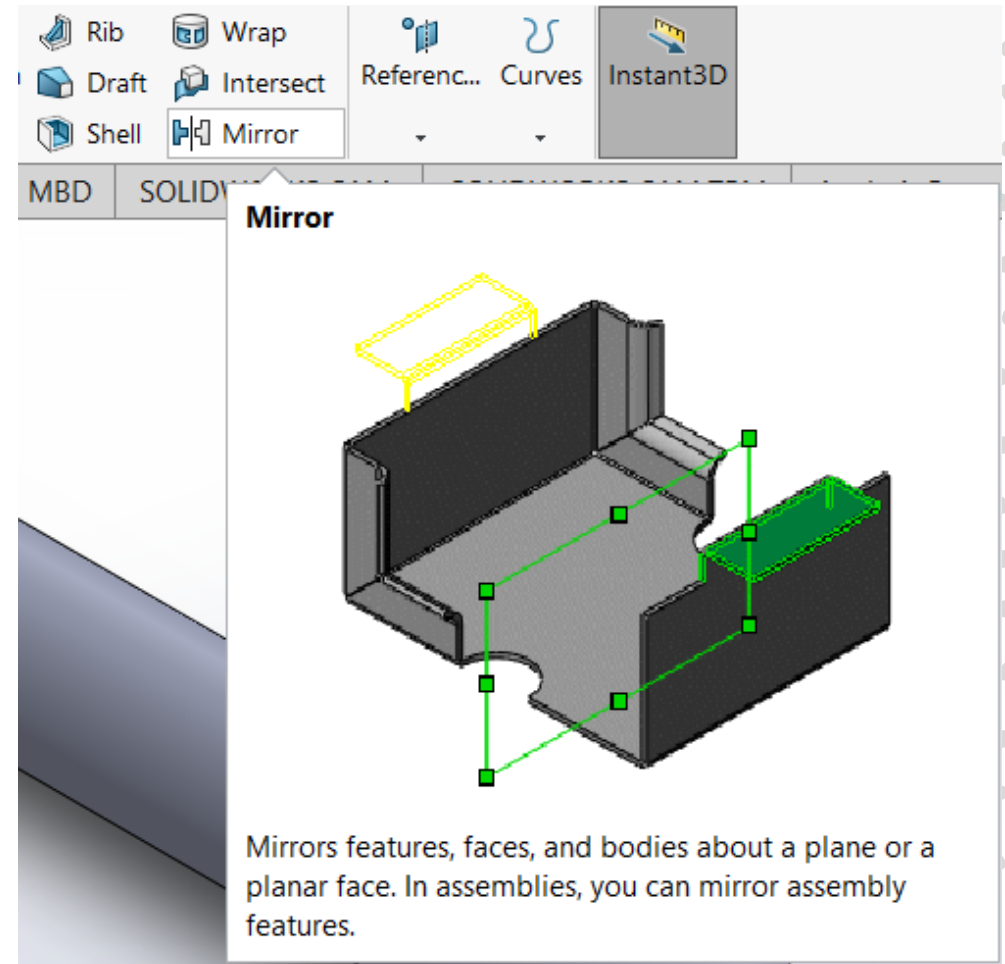
Reference Plane -  
Allows you to create in  
reference to your part  
(away from our main  
planes) or mirror entities

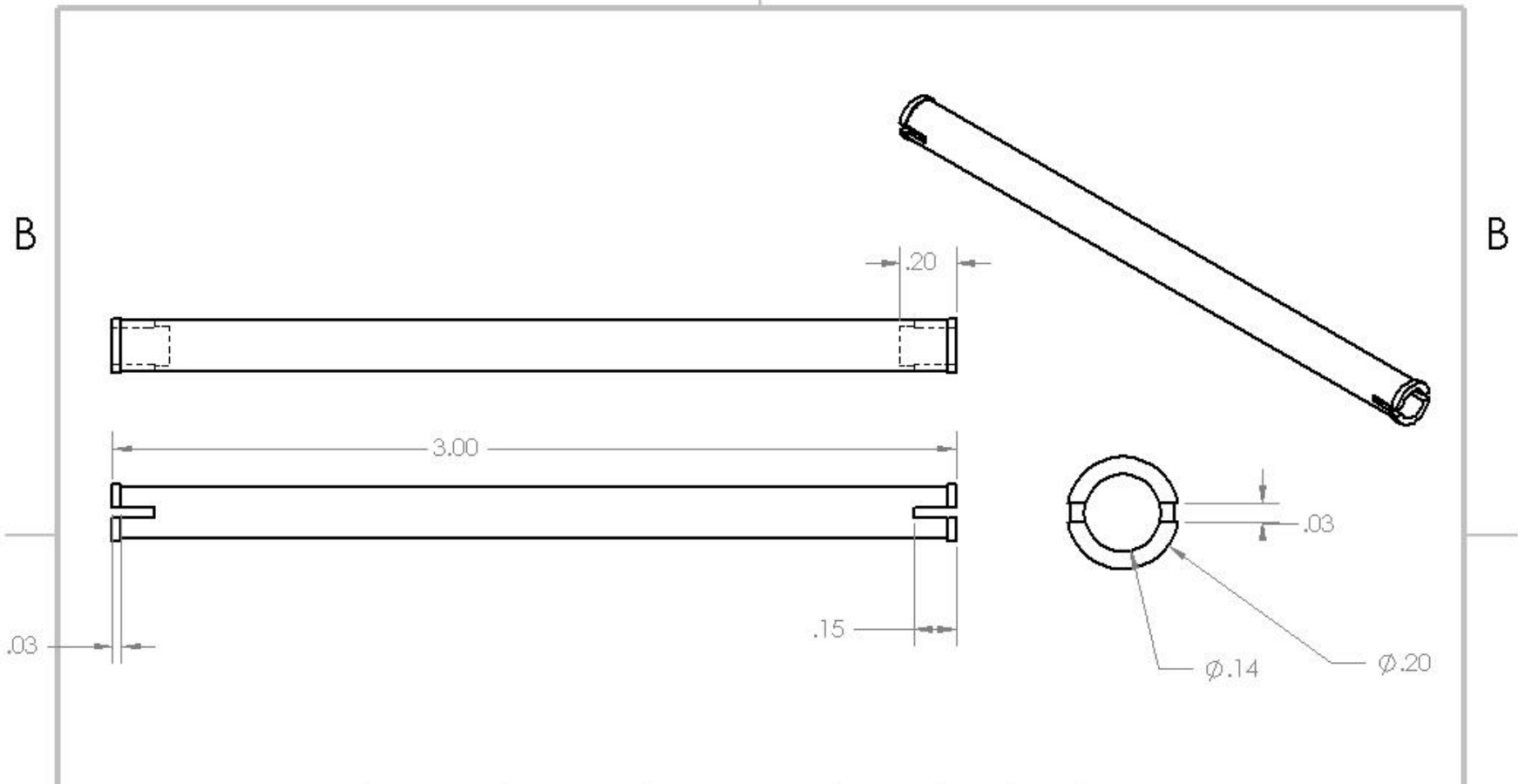


# Helpful Tools for Designing Axel

Mirror Bodies - Allows you to make mirror features on one portion of the body to another

**Features > Mirror**

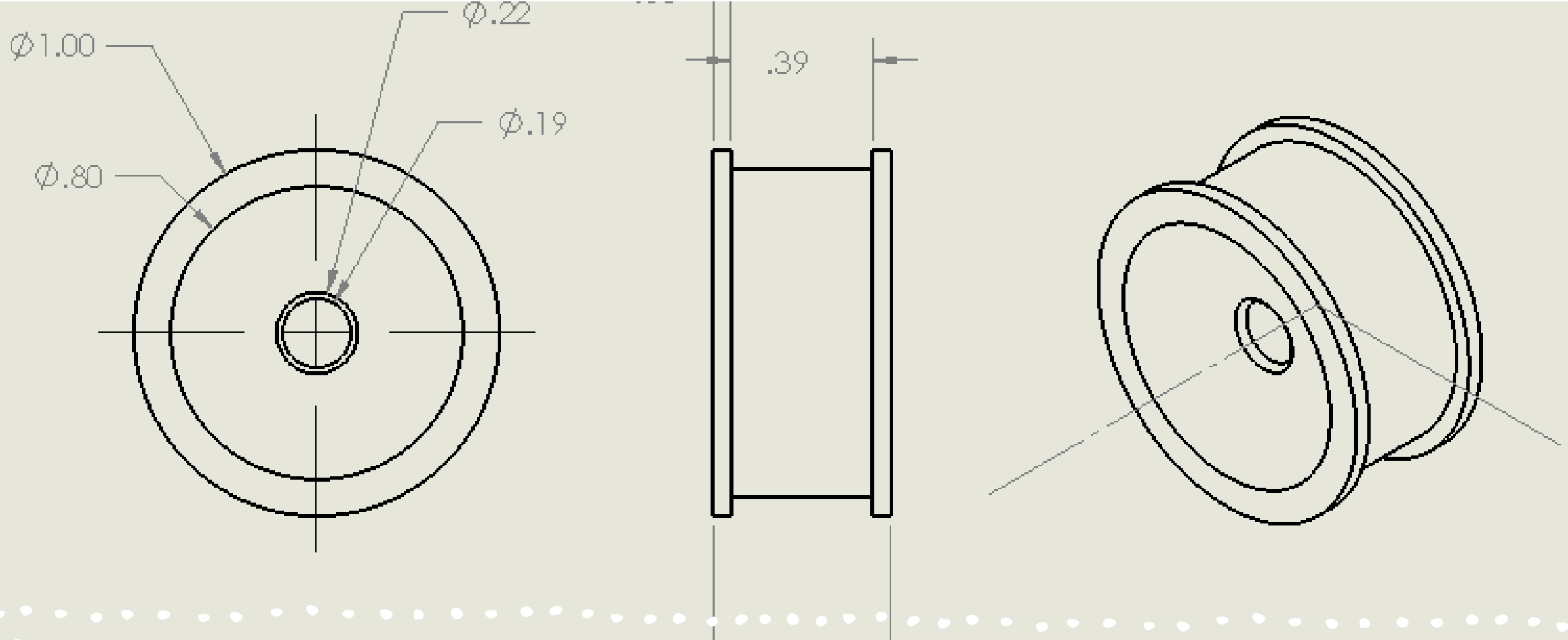




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		UNLESS OTHERWISE SPECIFIED:	NAME	DATE
		DIMENSIONS ARE IN INCHES	DRAWN	
		TOLERANCES:	CHECKED	
		FRACTIONAL: ±	ENG APPR.	
		ANGULAR: MATCH ± BEND ±	MFG APPR.	
		TWO PLACE DECIMAL ±	Q.A.	
		THREE PLACE DECIMAL ±	COMMENTS:	
		INTERPRET GEOMETRIC TOLERANCING PER:		
		MATERIAL:		
		FINISH:		
NEXT ASSY	USED ON			
APPLICATION		DO NOT SCALE DRAWING		

TITLE: AXEL		
SIZE	DWG. NO.	REV
<b>A</b>	axelDraw	
SCALE: 2:1	WEIGHT:	SHEET 1 OF 1



# Wheel Tutorial

N I C O B R A G A



# Helpful Tools for Designing Wheels

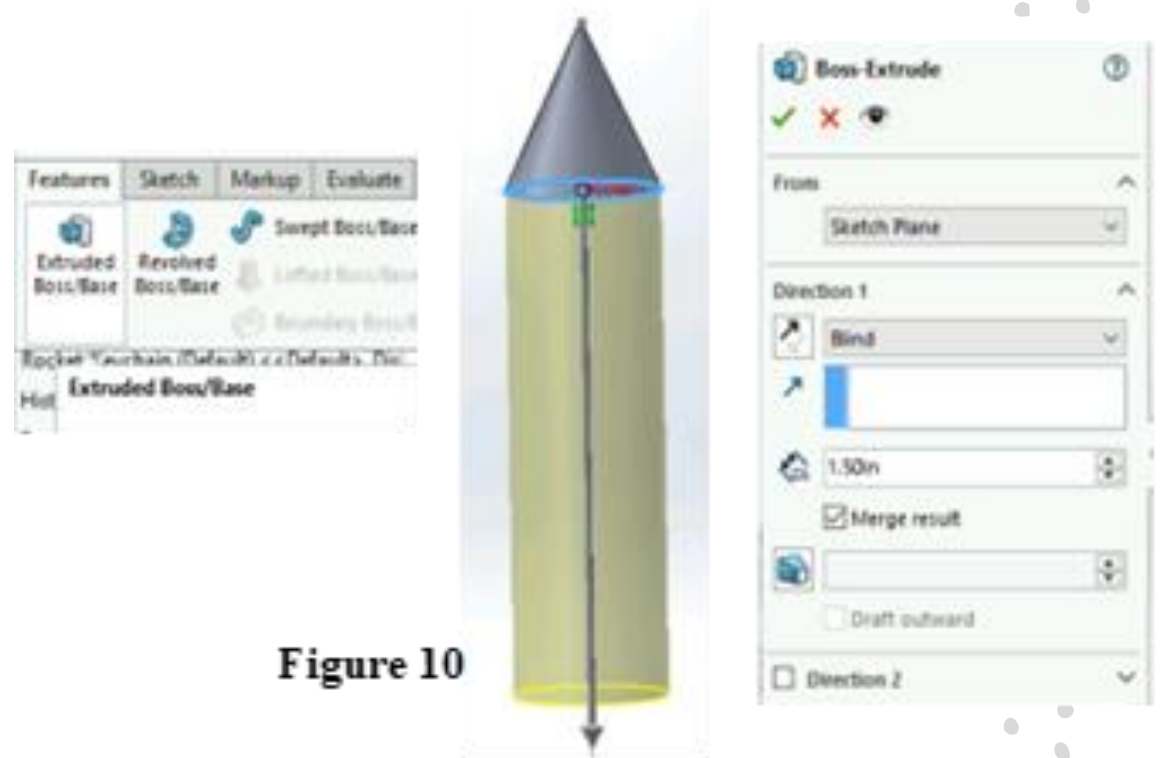
Sketch - Sketch function lets you create a 2D representation of your shape



Figure 15

# Helpful Tools for Designing Wheels

Extrude Boss - Allows your sketch to have a depth/height



# Helpful Tools for Designing Wheels

Revolve Boss - Allows you to revolve your sketch around a drawn axis

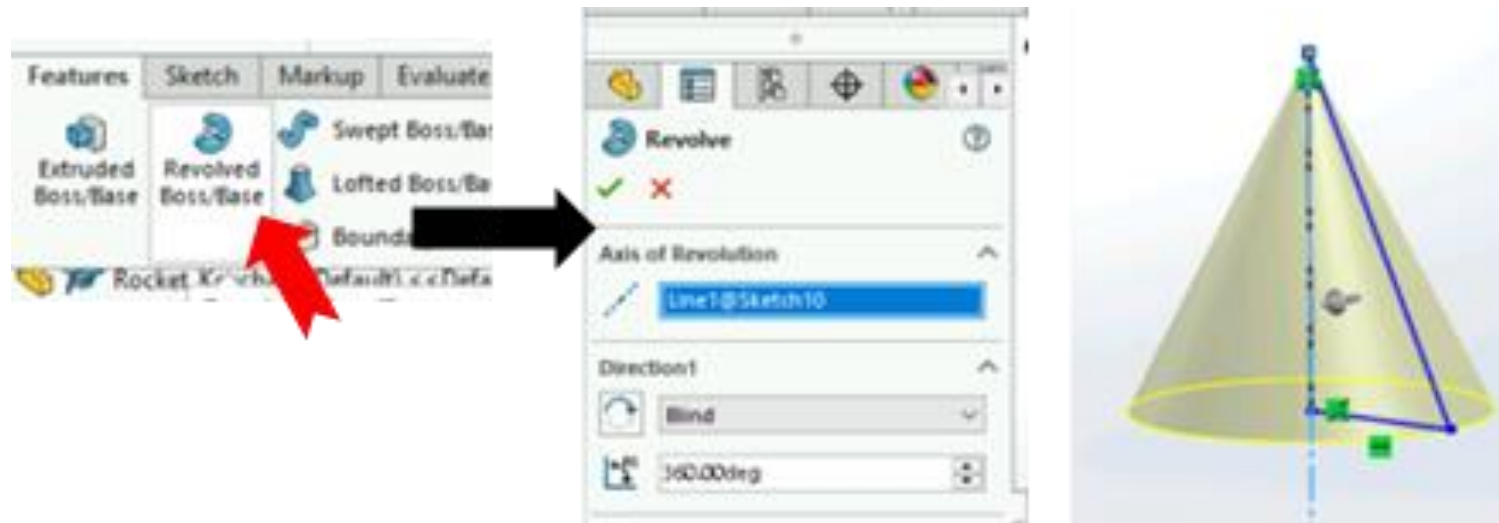


Figure 8

# Helpful Tools for Designing Wheels

Extruded Cut - Allows your sketch to cut into existing objects/shapes

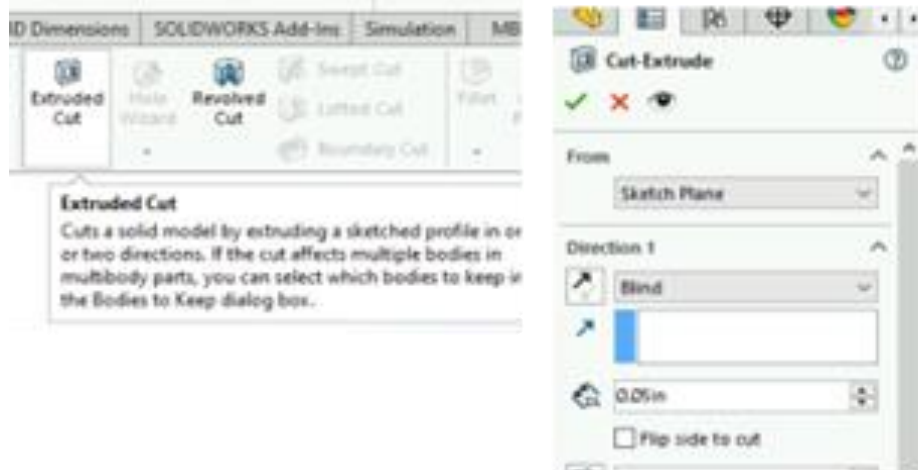


Figure 18

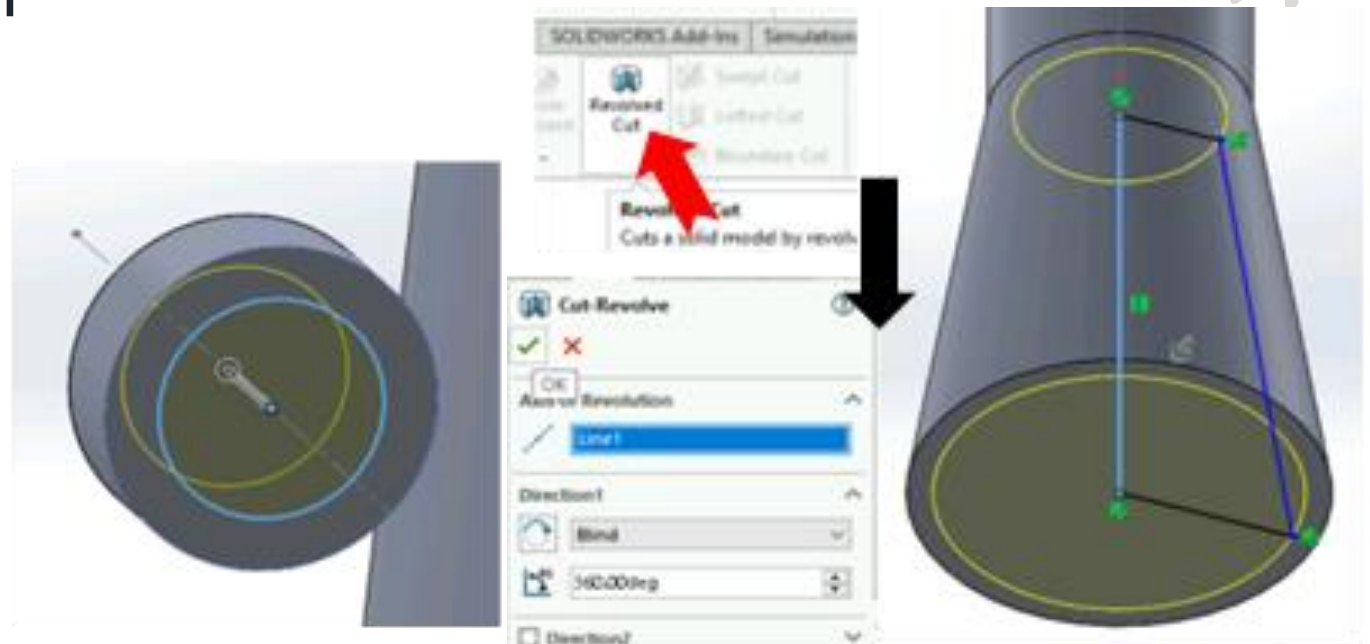


Figure 14



# Proper Tutorial

