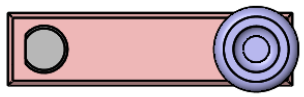
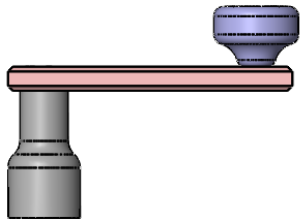
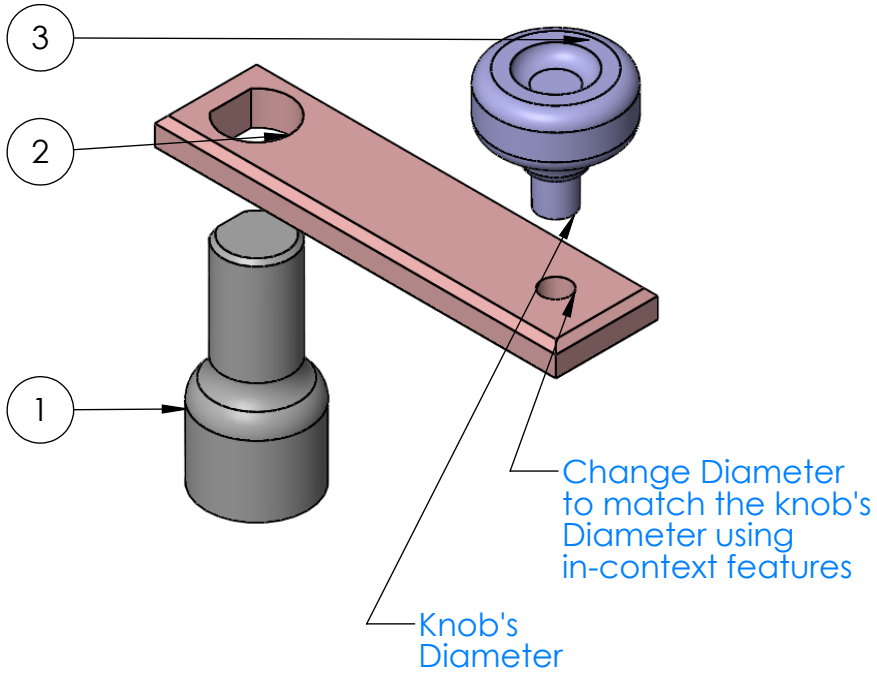
| ITEM NO. | PART NUMBER | QTY. |
|---|---|---|
| 1 | crank shaft connector | 1 |
| 2 | arm | 1 |
| 3 | knob | 1 |

Create the following assembly as use it as sub-assembly in the task next page.










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

"O snail
Climb Mount Fuji
But slowly, slowly!"
— Kobayashi Issa

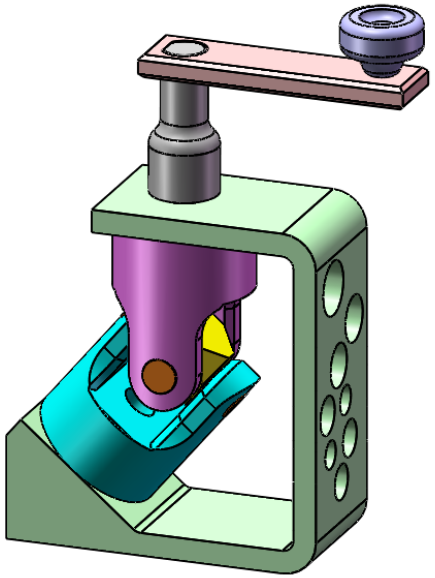
TITLE:

# Ex 6.1

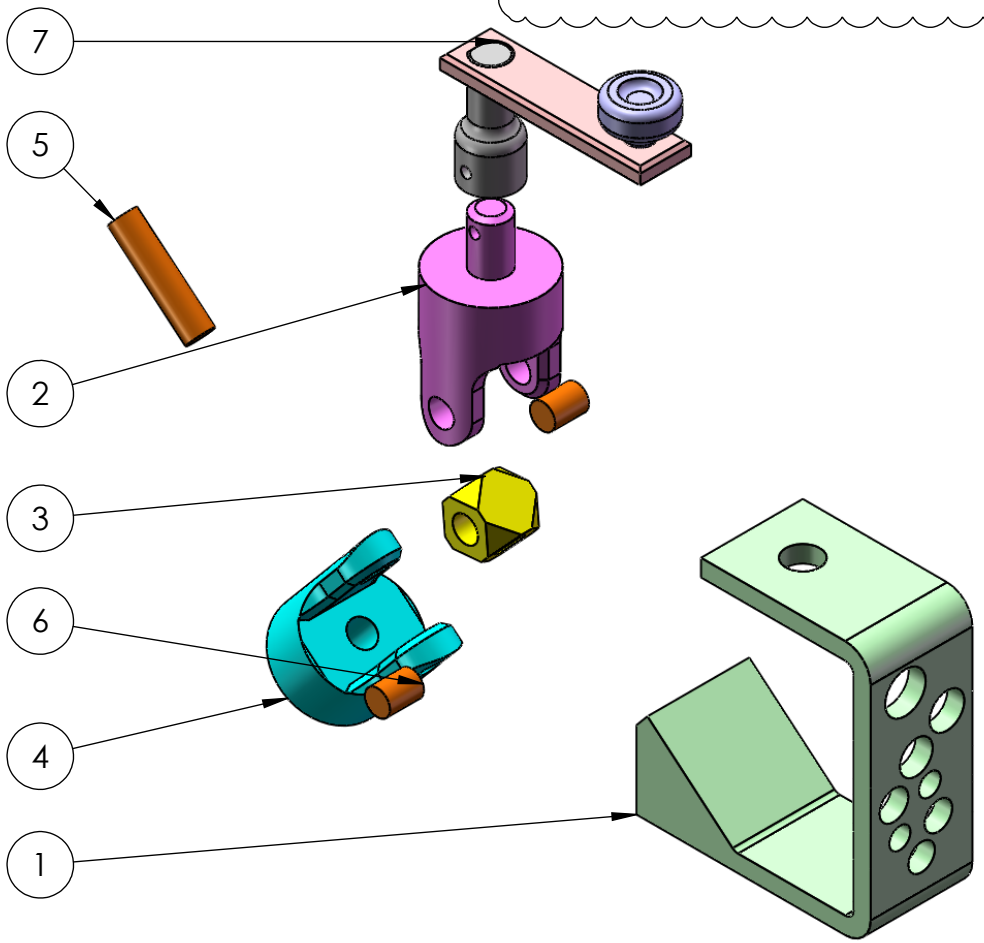
Meaurements in inches

| SIZE | DWG. NO. | REV |
|---|---|---|
| A | | |
| SCALE: 1:2 | WEIGHT: | SHEET 1 OF 6 |

| ITEM NO. | PART NUMBER | C1/QTY. |
|---|---|---|
| 1 | Bracket | 1 |
| 2 | Male Yoke | 1 |
| 3 | spider | 1 |
| 4 | Female Yoke | 1 |
| 5 | Pins (Configuration: Long) | 1 |
| 6 | Pins (Configuration: Short) | 2 |
| 7 | Crank Assembly | 1 |



Create The Following Assmebly.




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



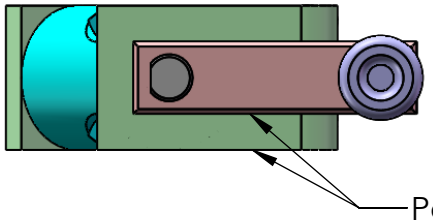
TITLE:

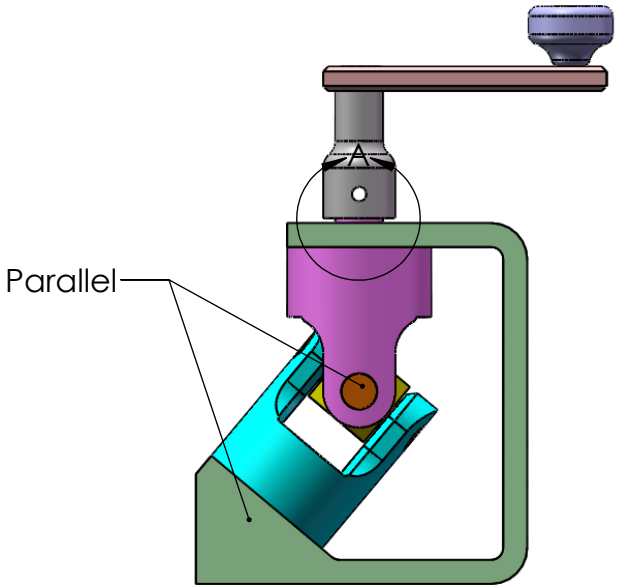
# Ex 6.1

Meaurements in inches

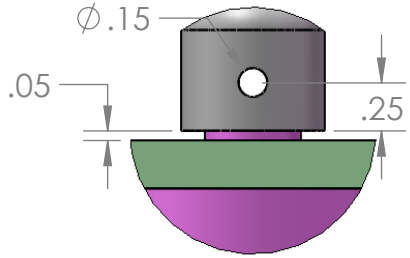
| SIZE | DWG. NO. | REV |
|---|---|---|
| A | | |

| SCALE: 1:2 | WEIGHT: | SHEET 2 OF 6 |
|---|---|---|




- Make the following hole as an assembly feature.
- Use the drilled hole to fixt the crank shaft connector to the Male Yoke.




DETAIL A
SCALE 1 : 1

hint:
Set the parallel relations first to fix the model, then drill the hole. You can supress those relations after fixing the crank shaft connector with the male yoke to simmulate movements.

| | | | | | |
|---|---|---|---|---|---|
| | | UNLESS OTHERWISE SPECIFIED: | | NAME | DATE |
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| | | | CHECKED | | |
| | | | ENG APPR. | | |
| | | | MFG APPR. | | |
| | | INTERPRET GEOMETRIC TOLERANCING PER: | Q.A. | | |
| | | MATERIAL | COMMENTS: | | |
| NEXT ASSY | USED ON | FINISH | | | |
| APPLICATION | | DO NOT SCALE DRAWING | | | |



TITLE:

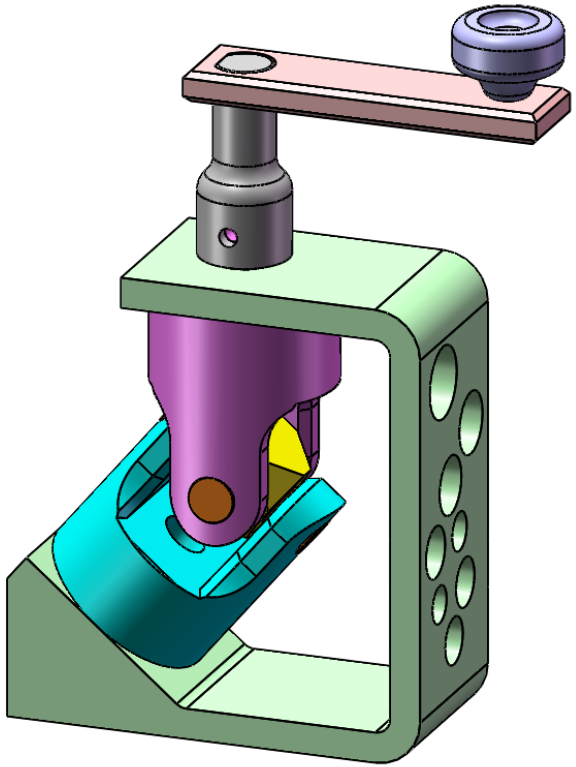
# Ex 6.1

Meaurements in inches

| SIZE | DWG. NO. | REV |
|---|---|---|
| A | | |

| SCALE: 1:2 | WEIGHT: | SHEET 3 OF 6 |
|---|---|---|

Find out if there are any interfering parts:
- What are the parts?
- What is the interference volume in cubic inches?



Answer:
Interfering Parts:
- Crank Shaft Connector
- Arm

Interference Volume
= 0.000 67 cubic inches



| | | | | | |
|---|---|---|---|---|---|
| | | UNLESS OTHERWISE SPECIFIED: | | NAME | DATE |
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| | | | CHECKED | | |
| | | | ENG APPR. | | |
| | | | MFG APPR. | | |
| | | INTERPRET GEOMETRIC TOLERANCING PER: | Q.A. | | |
| | | MATERIAL | COMMENTS: | | |
| NEXT ASSY | USED ON | FINISH | | | |
| APPLICATION | | DO NOT SCALE DRAWING | | | |

TITLE:

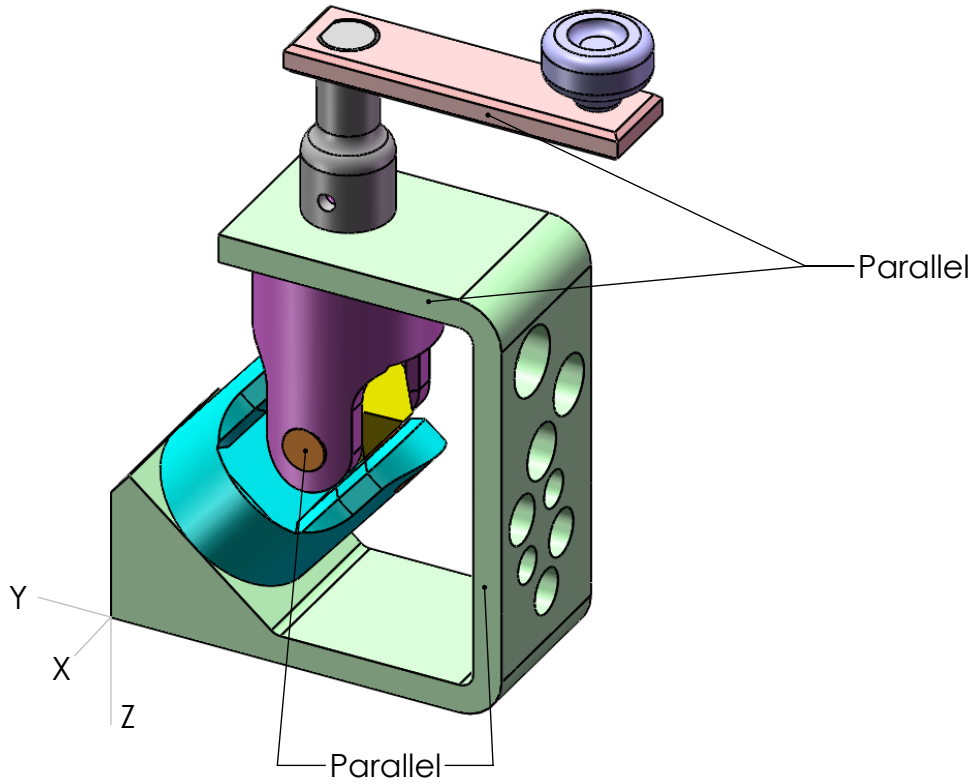
# Ex 6.1

Meaurements in inches

| SIZE | DWG. NO. | REV |
|---|---|---|
| A | | |

| SCALE: 1:2 | WEIGHT: | SHEET 4 OF 6 |
|---|---|---|

Find the Center of Mass in relation to the shown coordinate system in inches.




Answer:
Center of mass (inches)
X = - 0.75
Y = -1.75
Z = -2.13



| | | | | | |
|---|---|---|---|---|---|
| | | UNLESS OTHERWISE SPECIFIED: | | NAME | DATE |
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| | | | CHECKED | | |
| | | | ENG APPR. | | |
| | | | MFG APPR. | | |
| | | INTERPRET GEOMETRIC TOLERANCING PER: | Q.A. | | |
| | | MATERIAL | COMMENTS: | | |
| NEXT ASSY | USED ON | FINISH | | | |
| APPLICATION | | DO NOT SCALE DRAWING | | | |

TITLE:

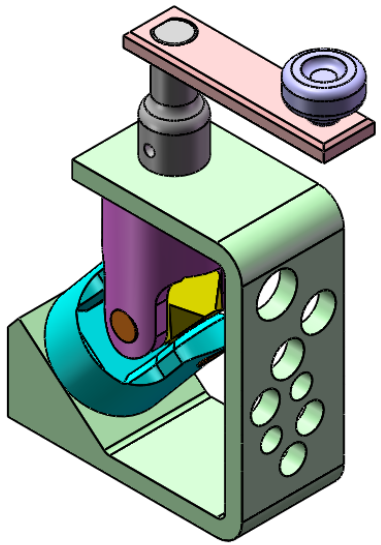
# Ex 6.1

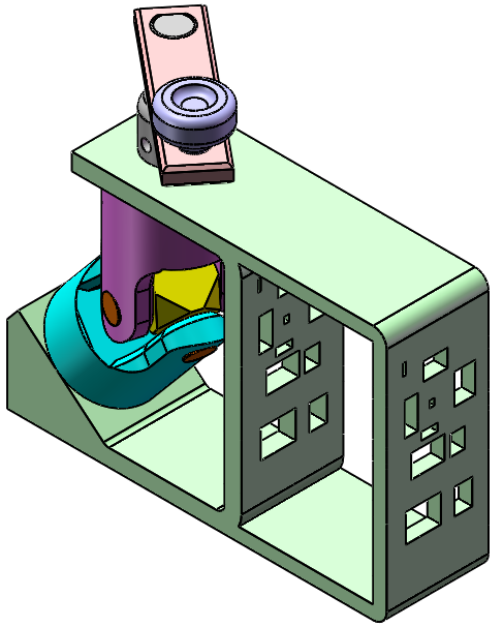
Meaurements in inches

| SIZE | DWG. NO. | REV |
|---|---|---|
| A | | |

| SCALE: 1:2 | WEIGHT: | SHEET 5 OF 6 |
|---|---|---|

Replace the Bracket with "Bracket_Updated"





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



TITLE:

# Ex 6.1

Meaurements in inches

| SIZE | DWG. NO. | REV |
|---|---|---|
| **A** | | |

| SCALE: 1:2 | WEIGHT: | SHEET 6 OF 6 |
|---|---|---|