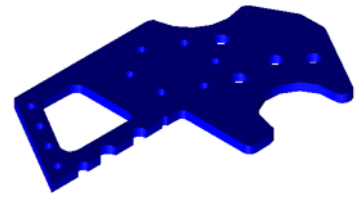
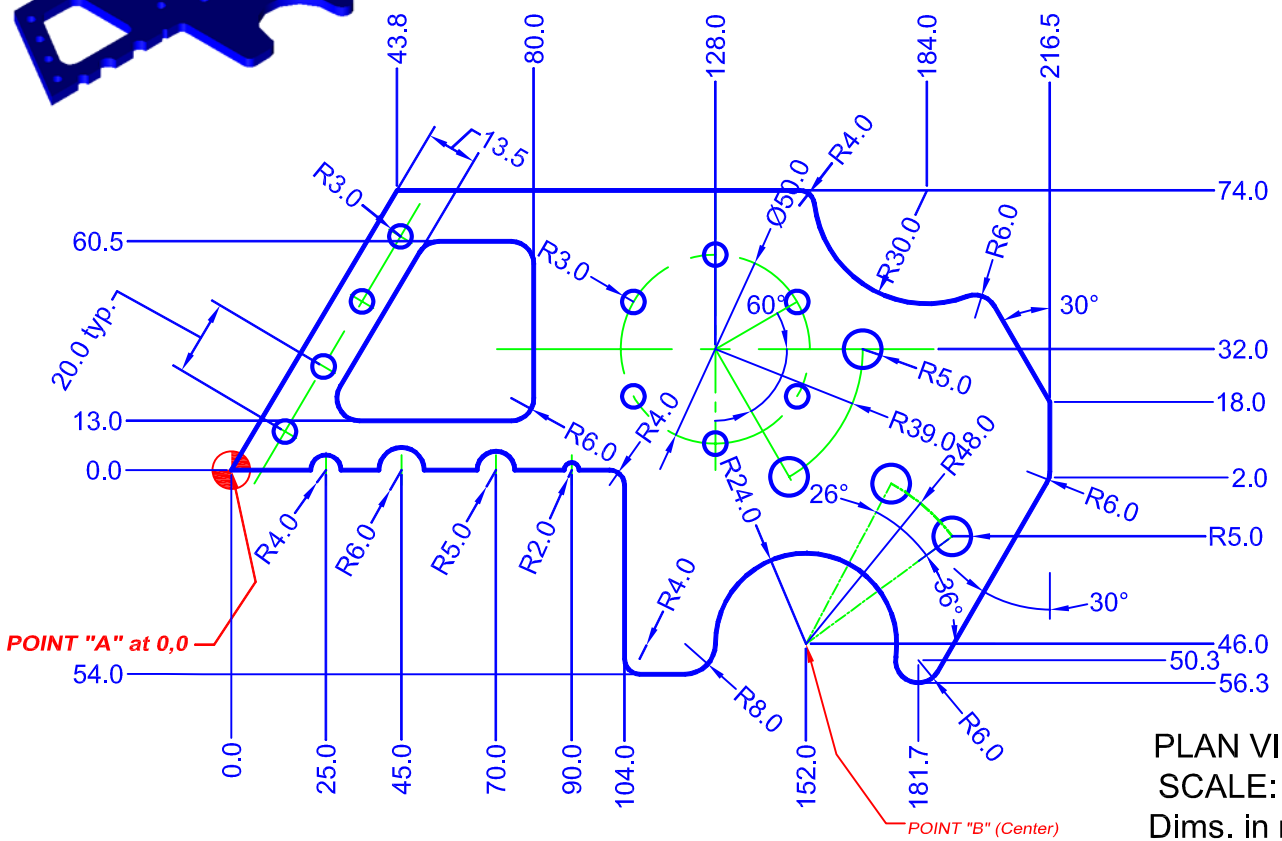
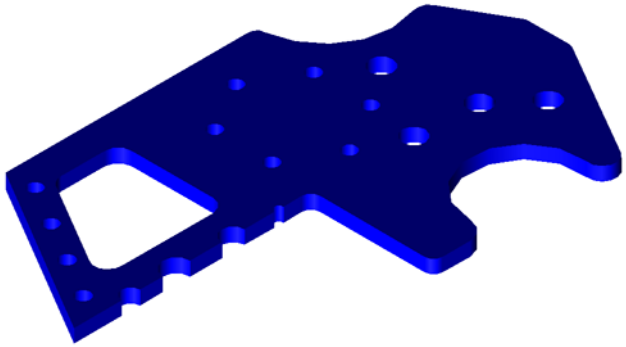
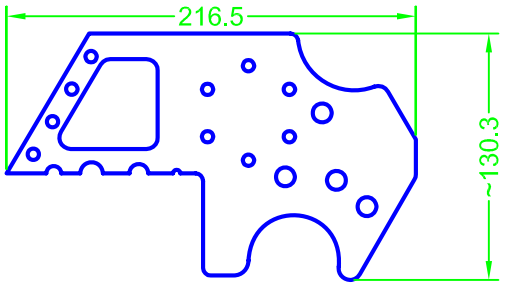




PLAN VIEW
SCALE: 1:2
Dims. in mm.





3D DRAWING SET-UP INSTRUCTIONS

1. "**EXTRUDE**" the 2D shape by 6 mm.
2. Be sure to create the holes as shown. "SUBTRACT" them.
3. Assumptions for questions below:
   Steel density: 6,587 Kgs./cubic meter
   Steel price: $0.84/Kg. Waste Material: 20%

3D DRAWING QUESTIONS

1. The volume of the 3D Solid is closest to:
   a. 83,095.13 cu. mm. b. 83,059.13 cu. mm. c. 83,509.13 cu. mm. d. 80,359.13 cu. mm. e. 83,959.13 cu. mm.
2. What is the cost of steel for 1000 pieces of the part with the assumptions shown in note 3 above?
   a.$505.08 b.$550.80 c.$650.08 d.$550.08 e.$555.08
3. The weight of one piece is closest to:
   a. 0.574 Kgs. b. 0.457 Kgs. c. 0.547 Kgs. d. 1.547 Kgs. e. 2.547 Kgs.
4. The total "TIME" you have spent creating this part is: _____
5. The start Date/Time for your version of this drawing is:_____
6. Use the "SCALE" command to increase the part's size by a factor of 1.2. The new volume of the part is closest to:
   a. 143562.17 cu. mm. b. 143256.17 cu. mm. c. 145326.17 cu. mm. d. 134526.17 cu. mm. e. 143526.17 cu. mm.

2D DRAWING TIPS:*

1. Use ACADISO.dwt template to start a metric dwg.
*2. Draw **LINE**s and CIRCLEs to draw shape of Plate.*
*3. "**TRIM**" away the unwanted part of the circles using the tangent lines as a cutting edge.*
*4. Use "**PEDIT**" to join the slot as one **closed** PLINE. (or "**BOUNDARY**" command to create a new **closed** PLINE.)*
*5. Use "**OFFSET**" to create the slot.*
*6. Use "**AREA**" command for Q1 and Q2.*
*7. Use "**ID**" for coordinates requested in question 3.*

3D DRAWING TIPS:*

*1. "**EXTRUDE**" all of the **closed** shapes (PLINES) drawn in 2D by 6mm.*
*2. "**SUBTRACT**" away the holes from the outer shape.*
*3. Use "**PROPERTIES**" dialogue to confirm/change if a PLINE is **closed** or not. Only **closed** PLINES can be extruded.*
*4. Use "**MASSPROP**" for bracket volume (Q4).*

** These are tips only and do **NOT** include every single step or keystroke to complete the drawing.*

THE EKHO INSTITUTE
Ottawa, Canada
Copyright by EKHO

DWG TITLE	PLATE3_2002		
CLIENT	THE EKHO INSTITUTE	Rev. 2 Corrected answers and instructions and questions.	
DWN BY	EKH	DATE: 2003/09/26	REV.# 2 DATE: 2003/10/03
CHKD BY	EKH	DATE: 2003/10/03	REV. BY: EKH
		DWG NO:	PLATE3_2002
SCALE:	1:1 on Letter size	SHEET OF 1	
DESIGNED BY:	EKH	PROJECT: EH20030926	DISK: SERVER