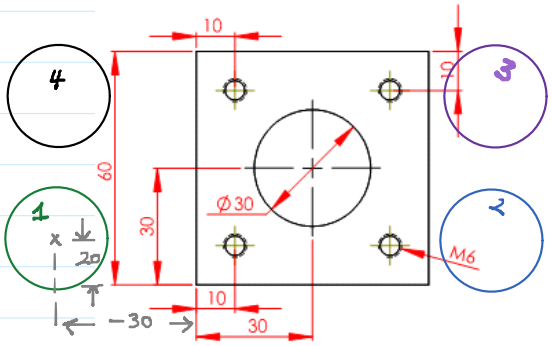
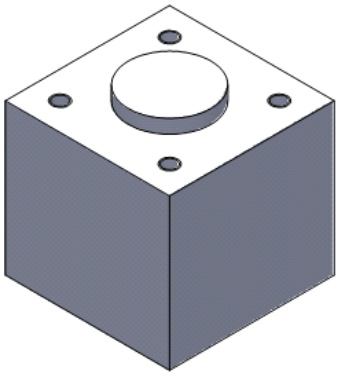
# Circular interpolation

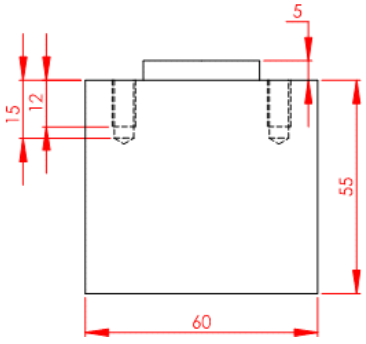
Tuesday, October 25, 2016 12:45 PM

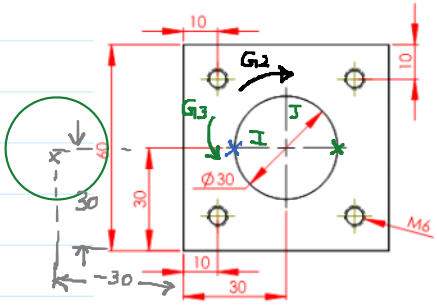
O 3 (Circular interpolation)

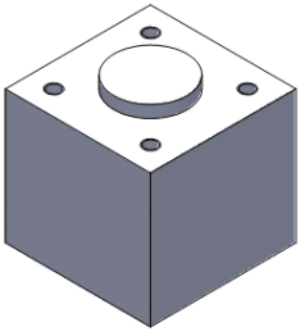


```
N5   G54
N10  G52 X0 Y0 Z29.5
N15  T1 M6 H1 G43
N20  G97 S1500 G94 F250 M3
N25  G0 X-30 Y20 (1)
N30  Z0          (1)
N35  G1 X90      (2)
N40  Y40         (3)
N45  X-30        (4)
N50  T2 M6 H2 G43
N55  G97 S2000 G94 F200 M3
N60  G0 X-30 Y30
N65  Z0
N70  Z-1.5
N75  G1 X15 H12 G41
N80  G2 X15 Y30 I15 J0
```



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G2 X45 Y30 R15
G2 X15 Y 30 R15
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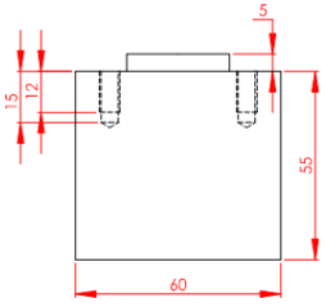
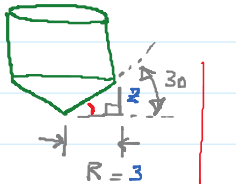



```
N85  G1 X-30 G40
N90  G0 Z-5
N95  G1 X15 H12 G41
N100 G2 X15 Y30 I15 J0
N105 G1 X-30 G40
N110 T7 M6 H7 G43
N115 G97 S1200 G94 F100 M3
N120 G0 X10 Y10 Z10
N125 G1 Z-6.7 (-1.7 -5)
N130 Z10
N135 G0 X10 Y50
N140 G1 Z-6.7
```




SOH CAH TOA

$$\tan\Theta = \frac{O}{a} = \frac{Z}{R}$$

$$Z = \tan\Theta\, R$$

$$= \tan(30) \times 3 = 1.73$$

N145 G0 Z10

N150 X50

N155 G1 Z-6.7

N160 G0 Z10

N165 Y10

N170 G1 Z-6.7

N175 G0 Z10

N180 T4 M6 H4 G43

N185 G97 S2000 G94 F150 M3

N190 G0 X10 Y10 Z1

N195 G83 Z-20 Q3 — Q3: CUTTING DIVISION OF 3MM

Withdrawing drilling cycle

Z-20: DRILLING DEPTH OF 20MM

N200 Y50

N205 X50

N210 Y10

N215 G0 Z10

N220 M30