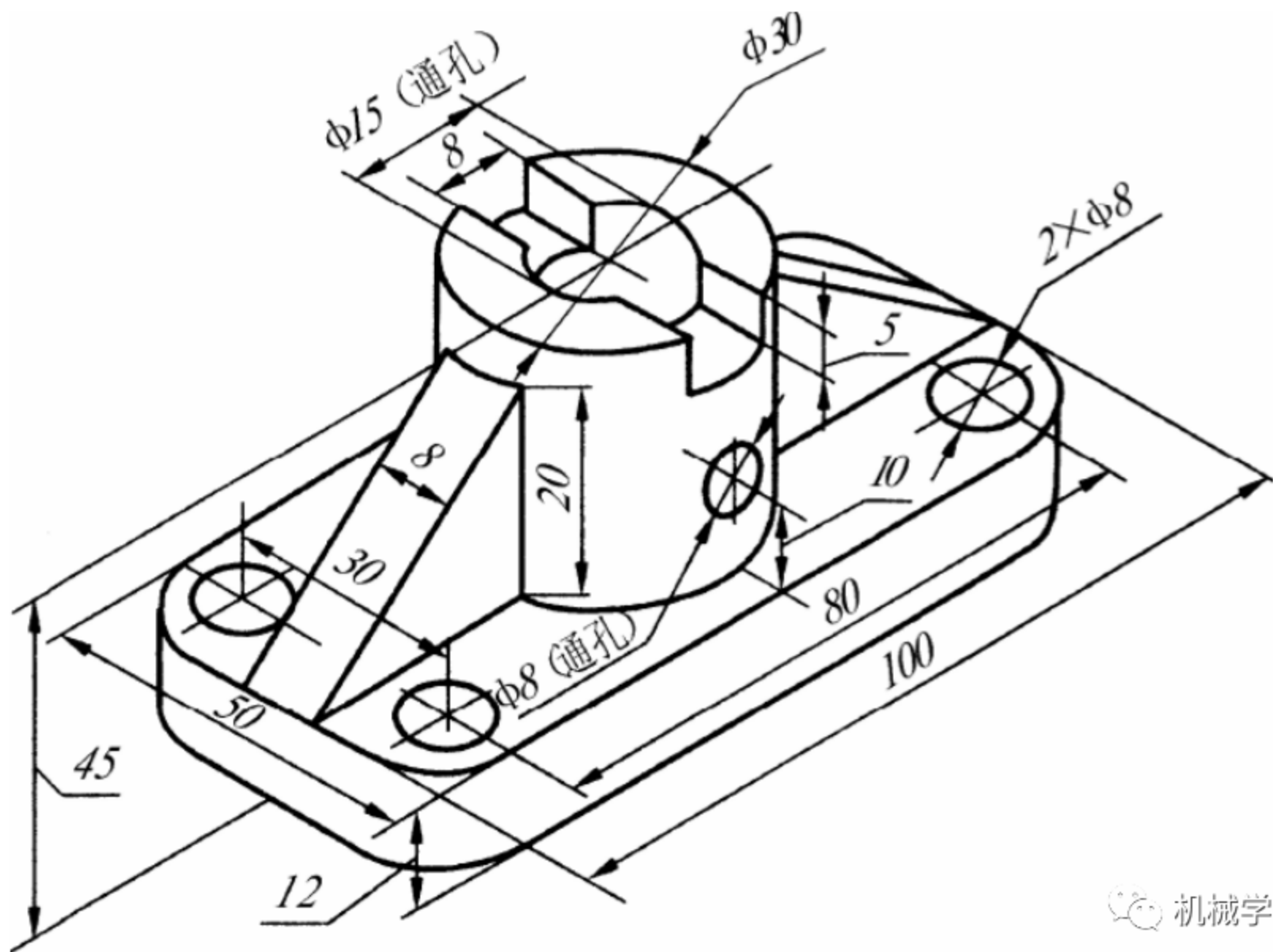
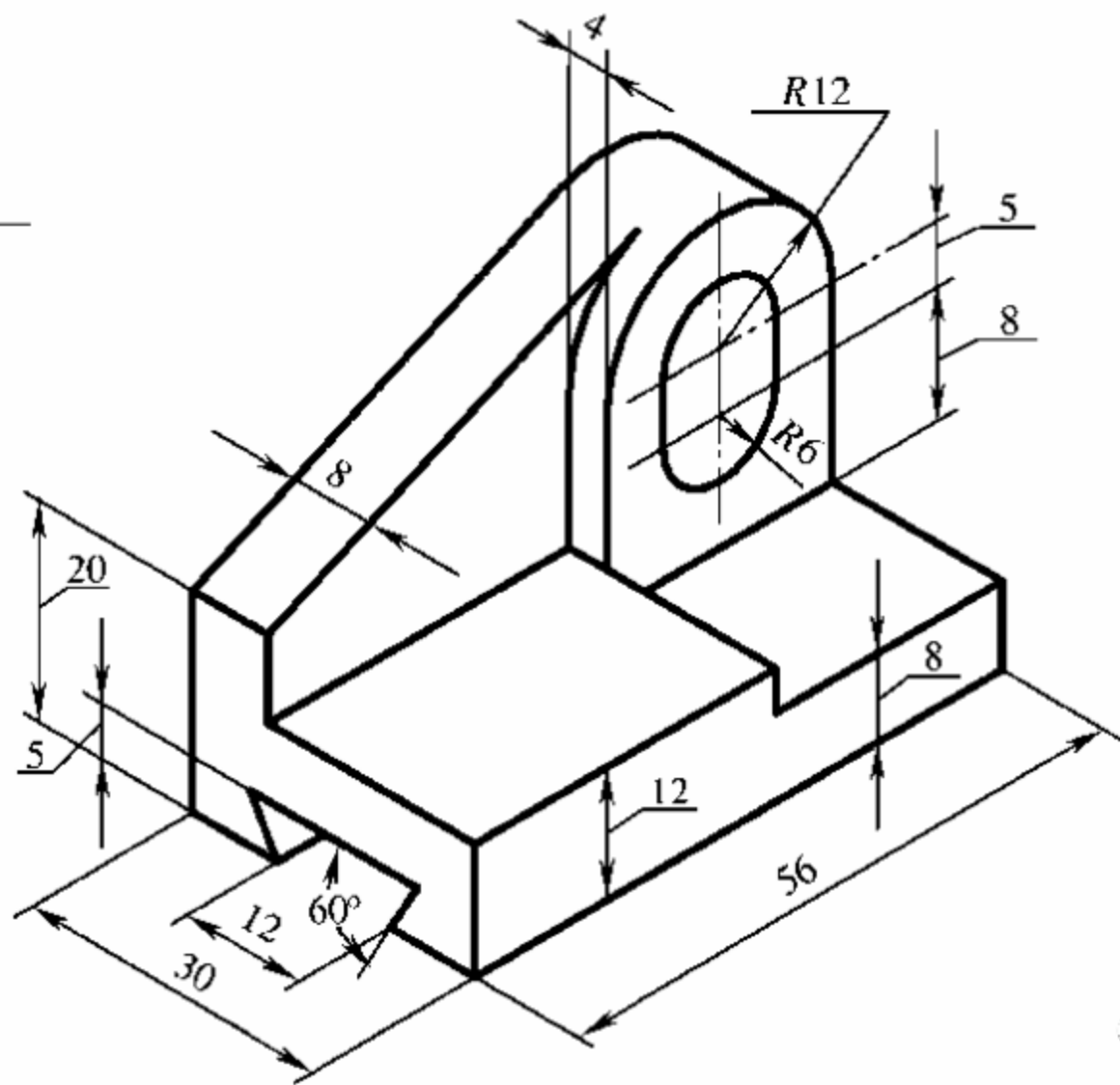
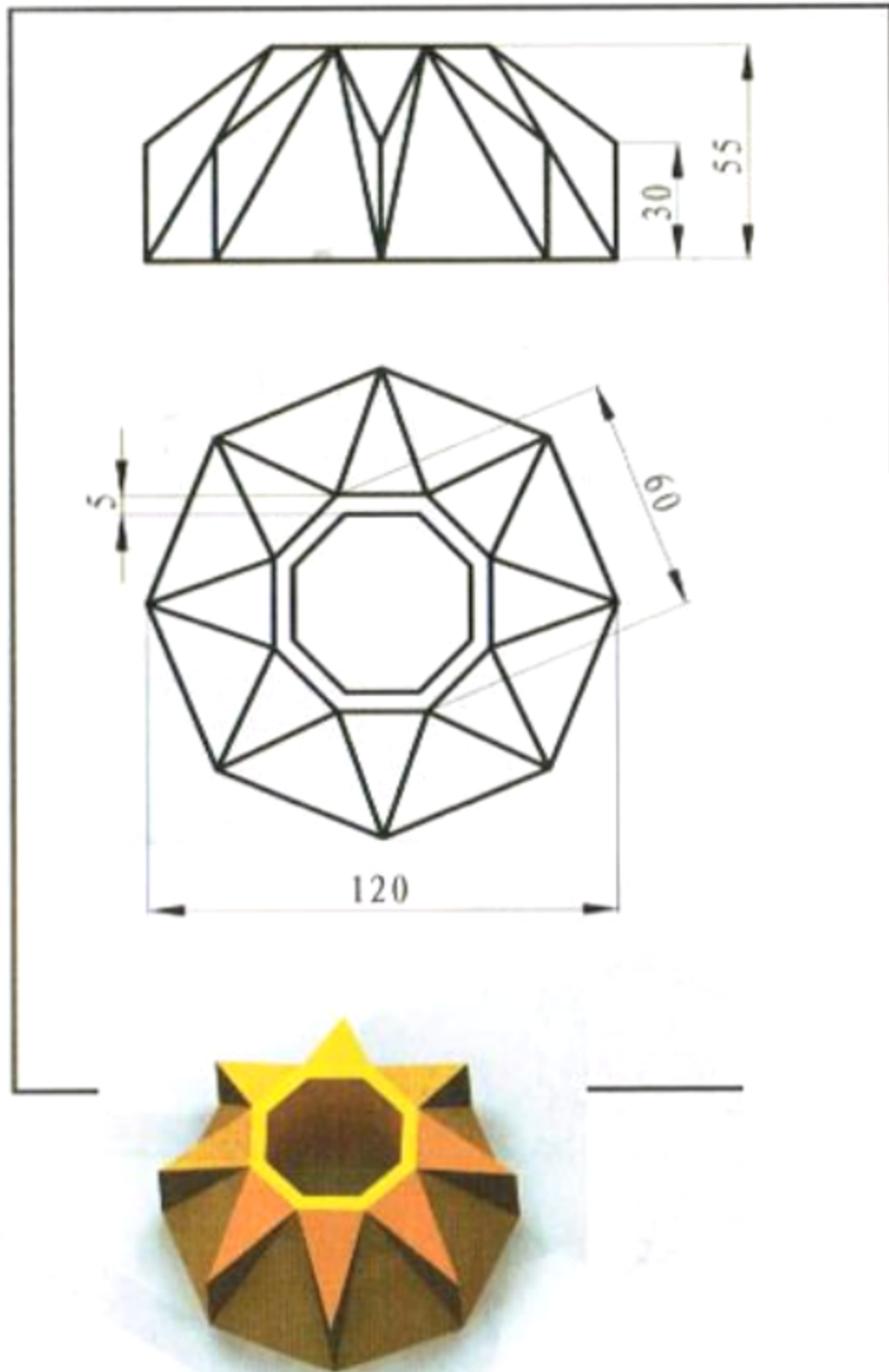
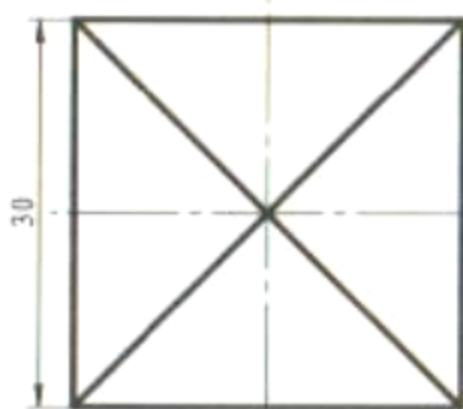
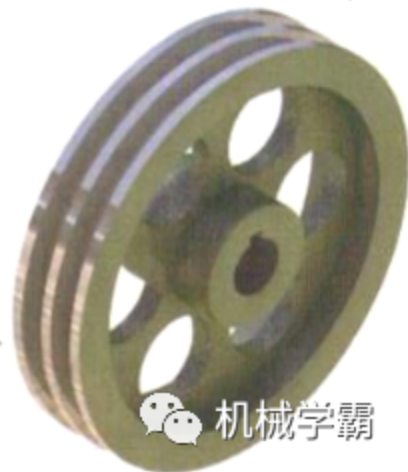
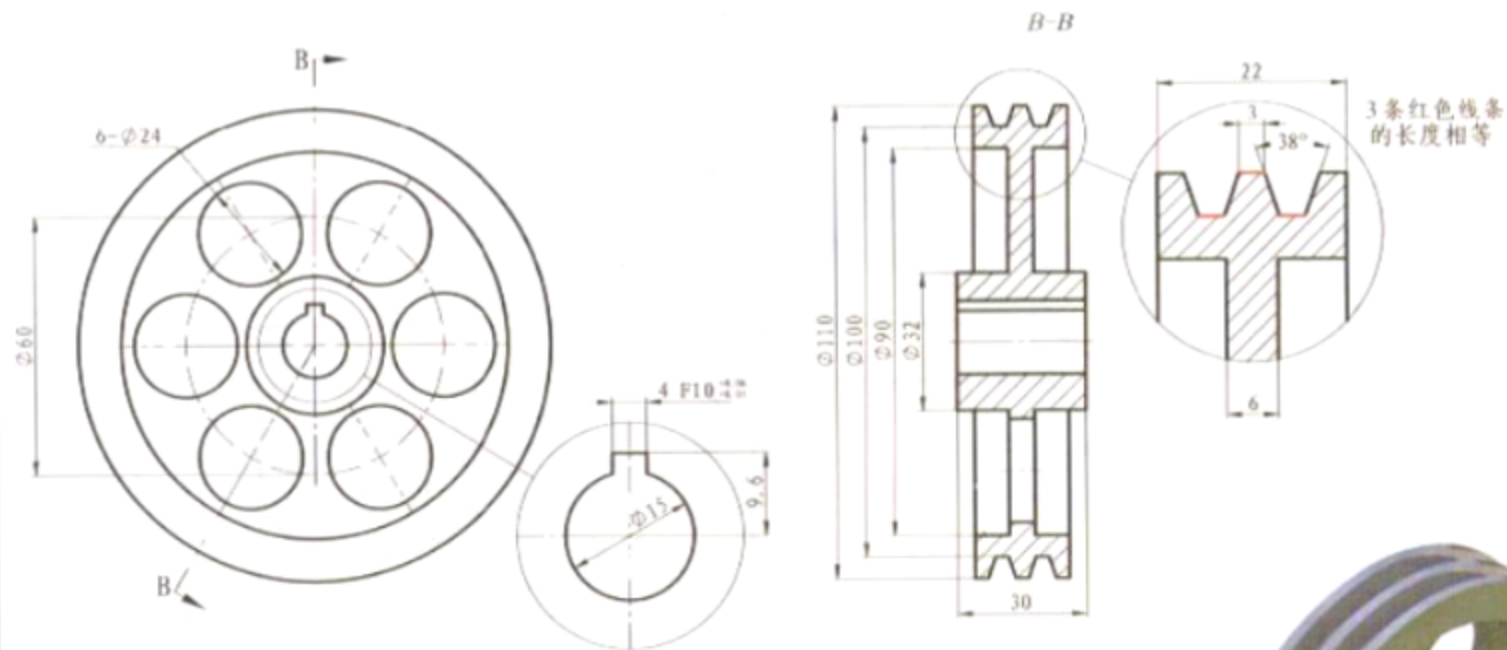


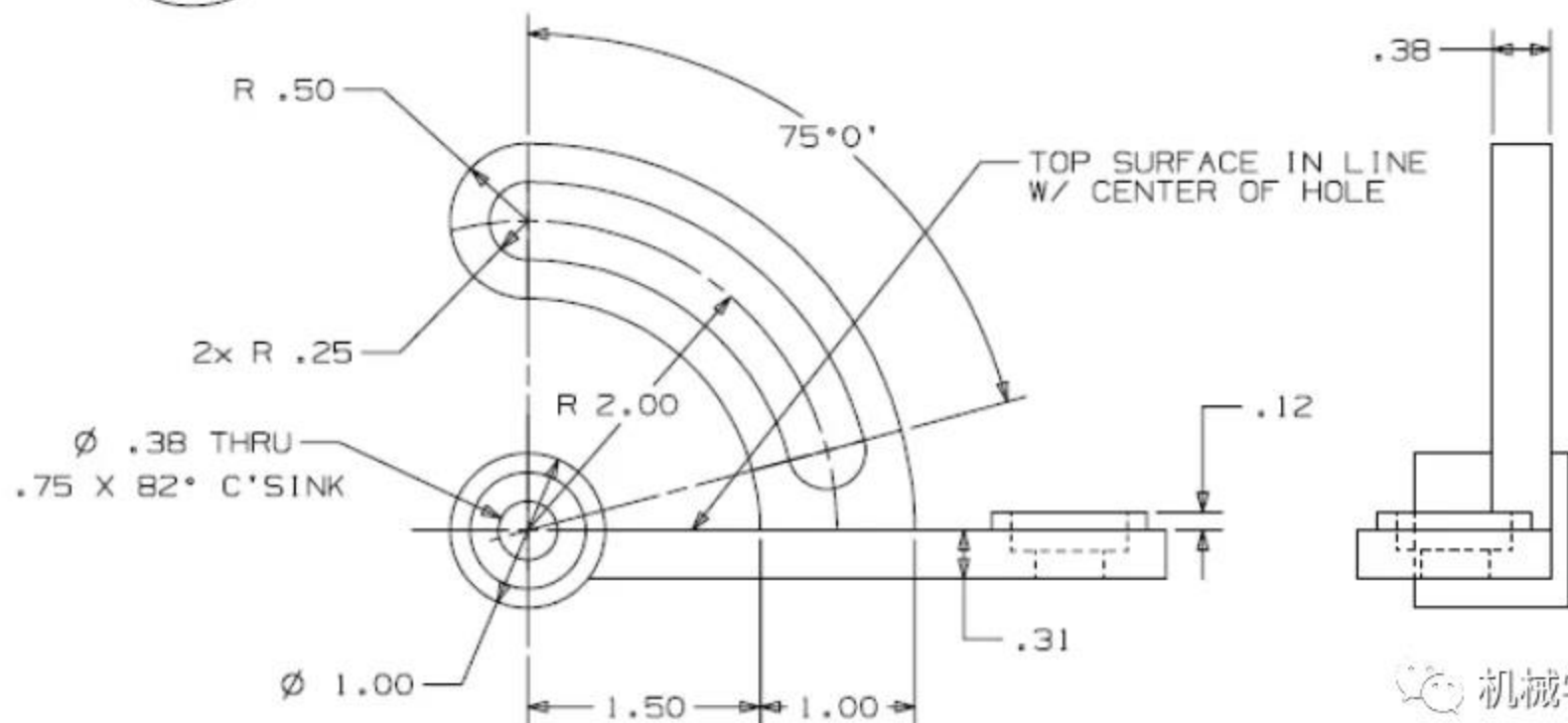
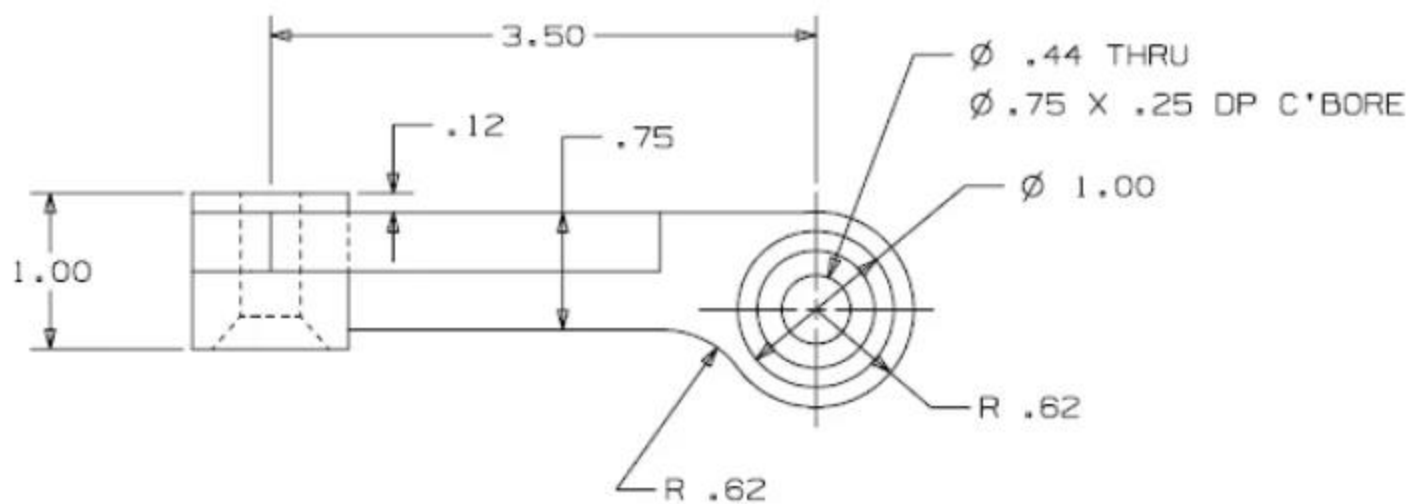


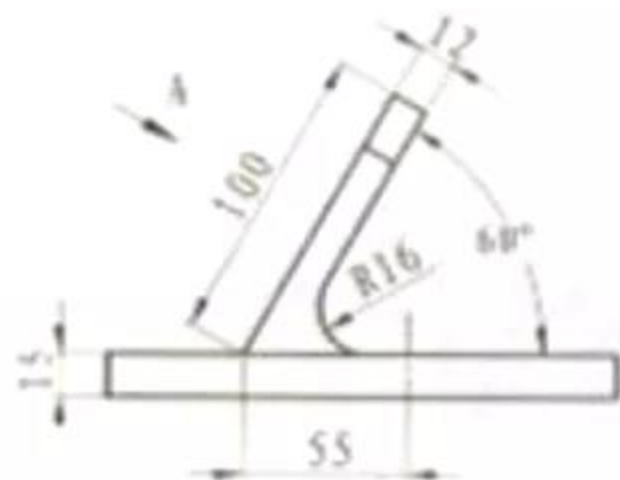




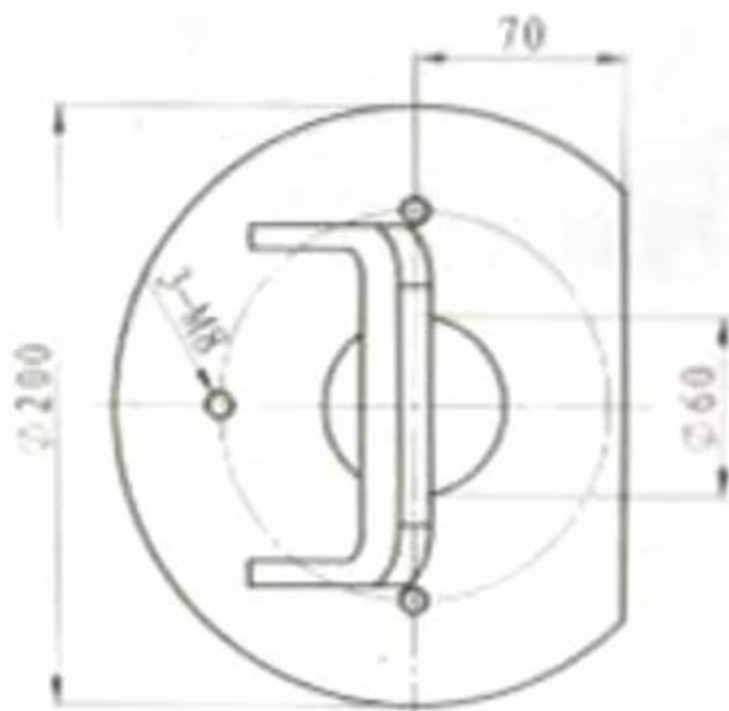
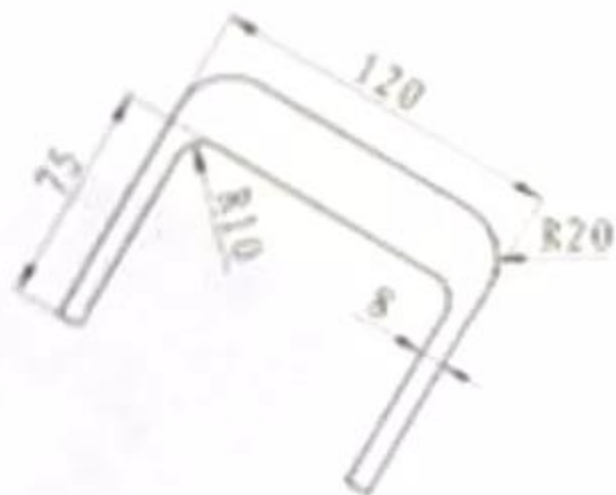


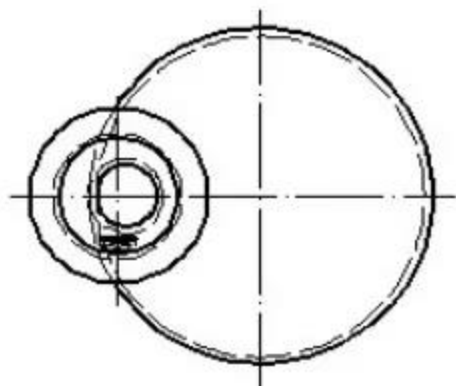
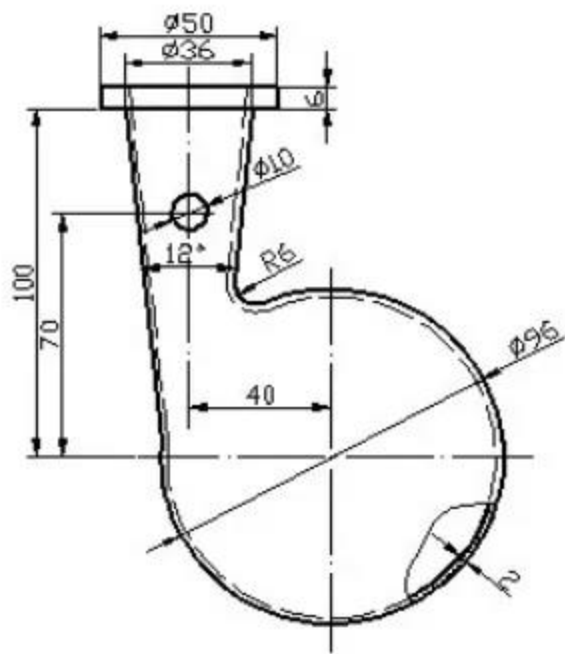


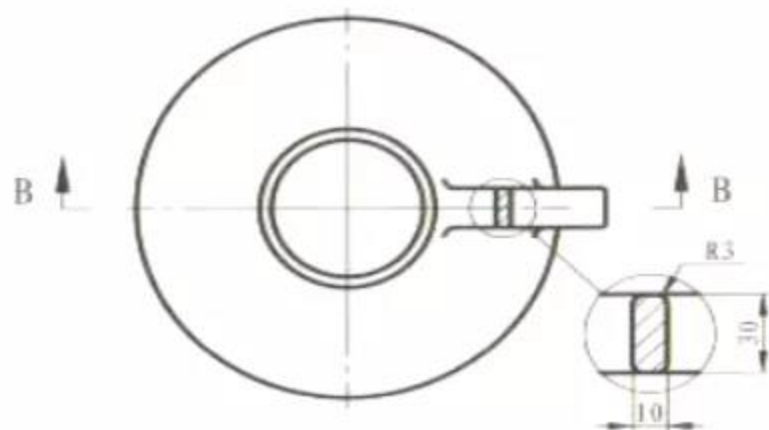
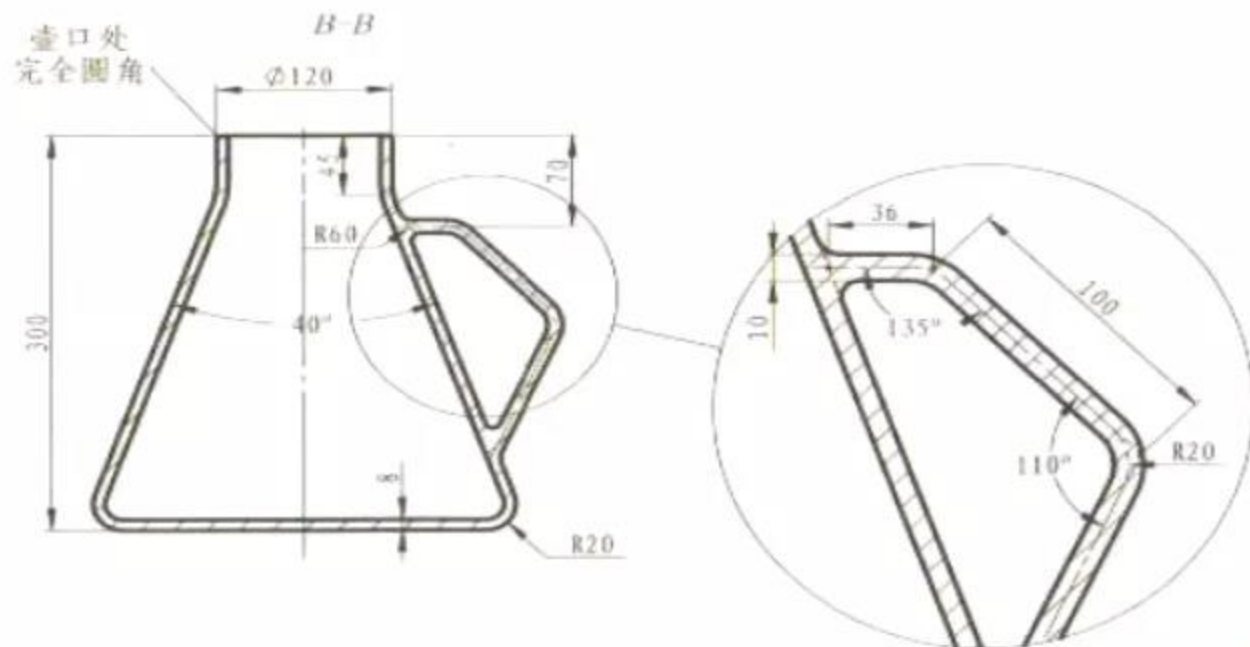


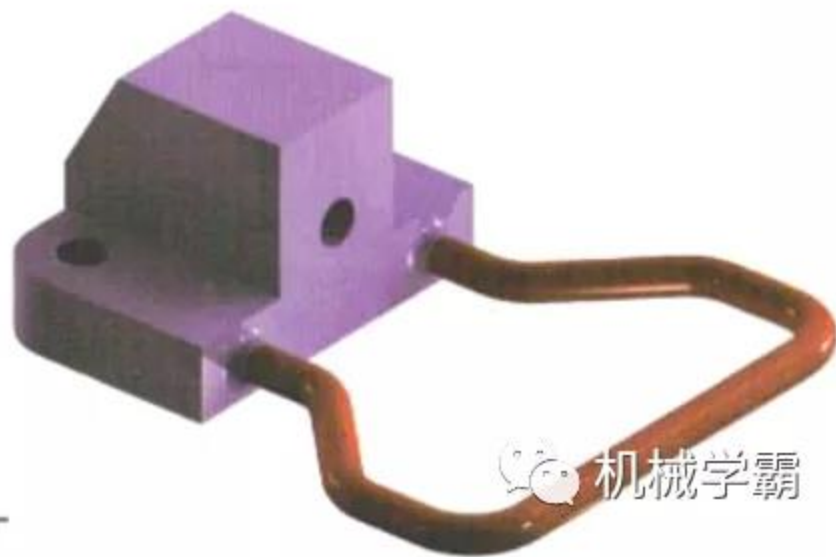
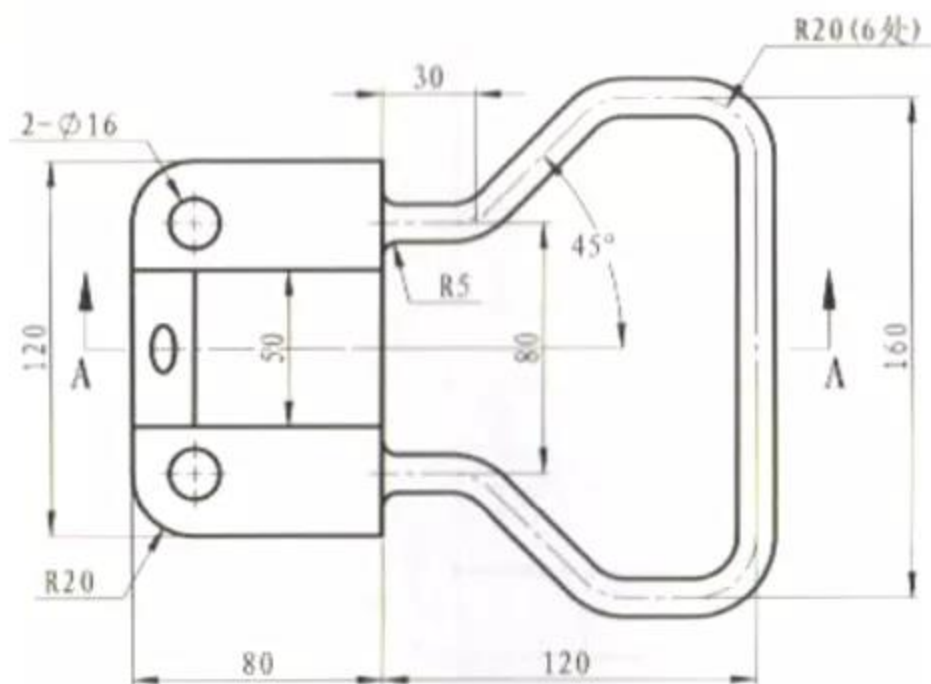
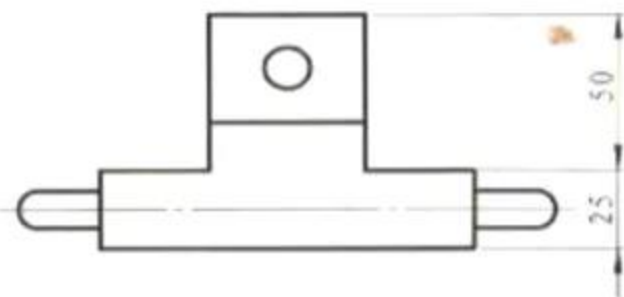
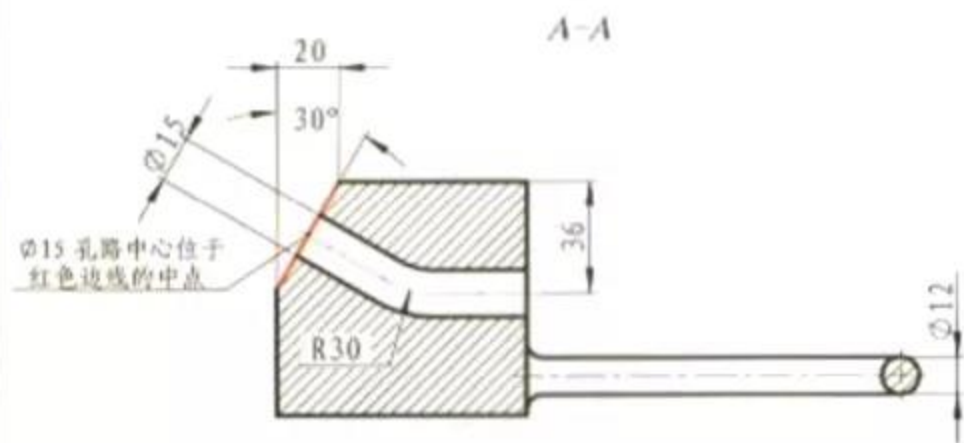


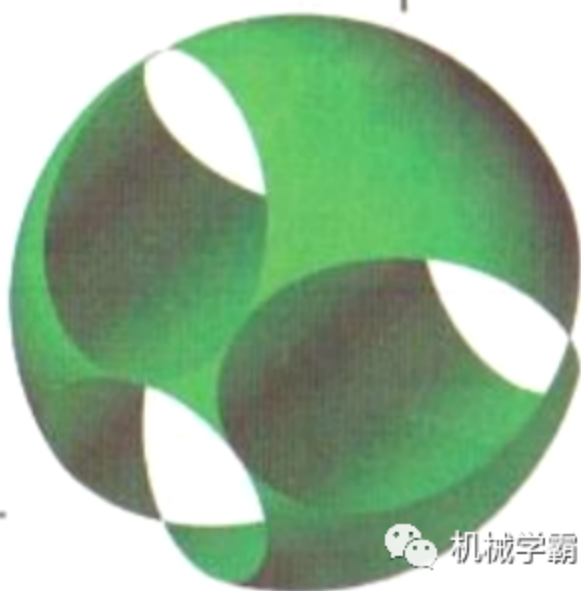
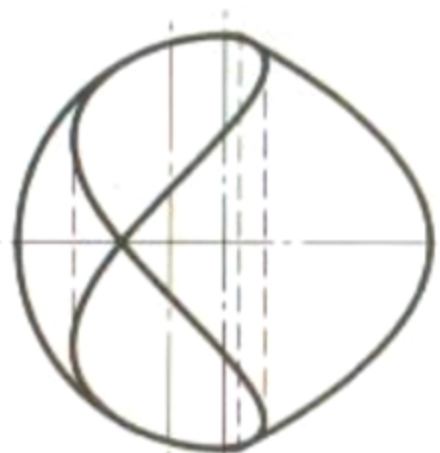
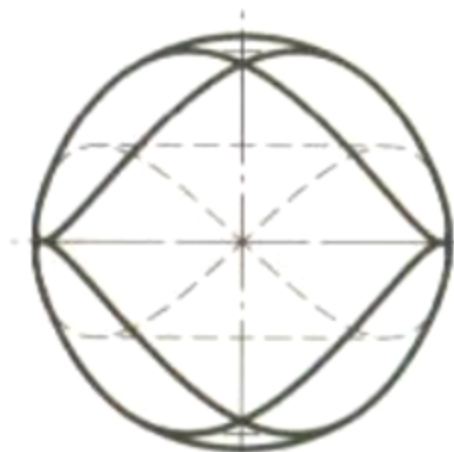
视图 A

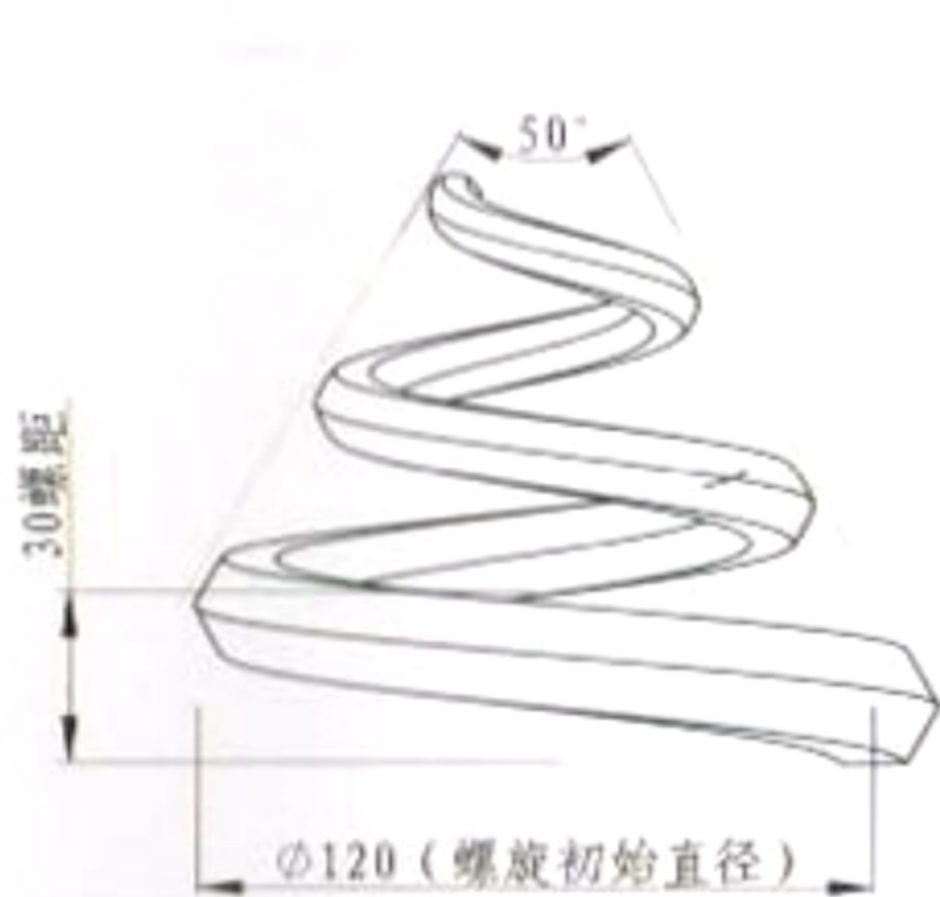


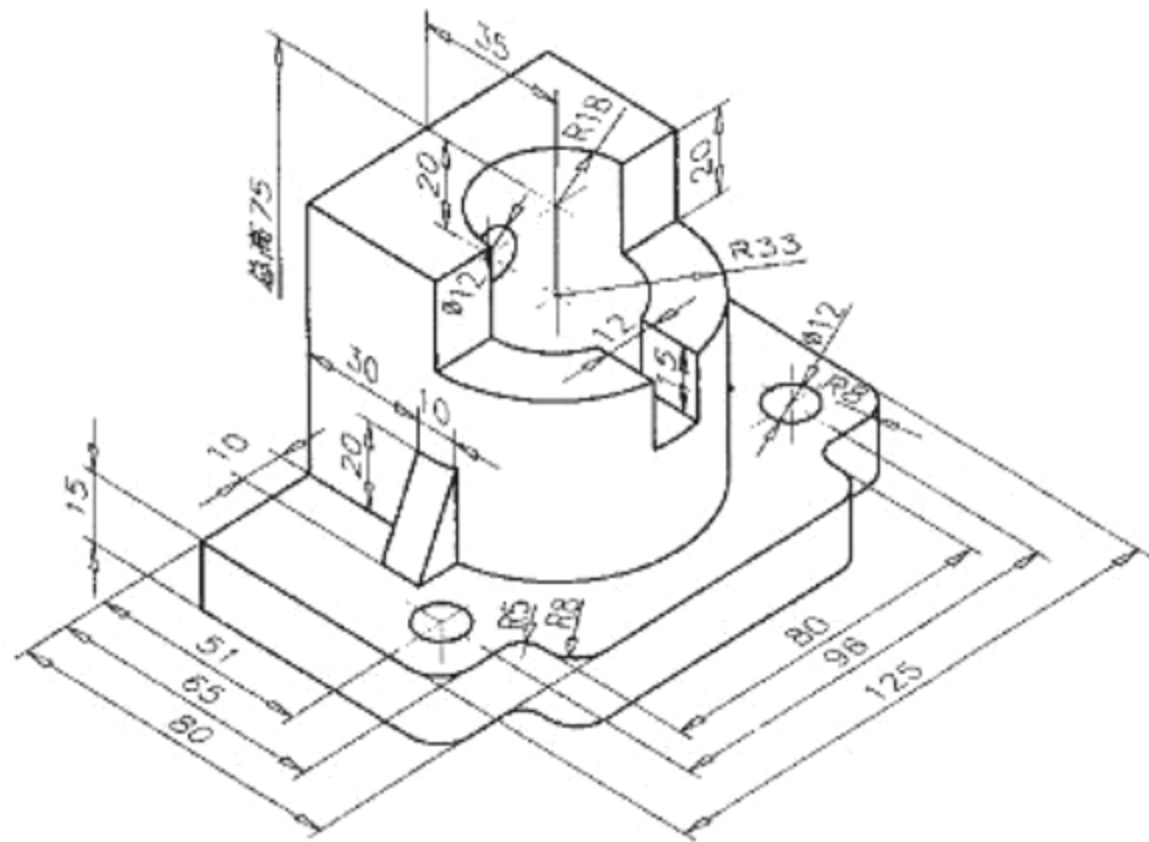


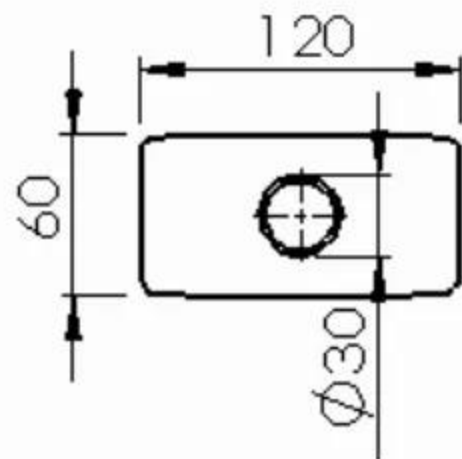
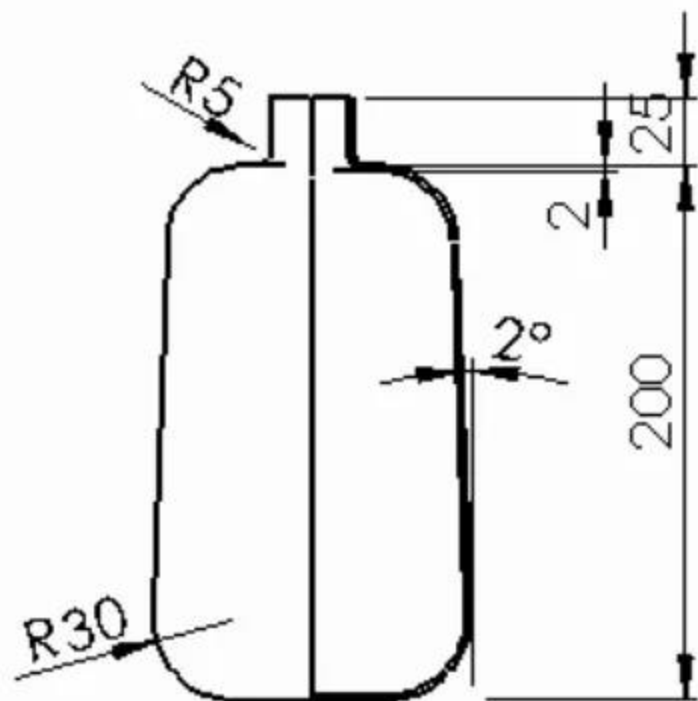


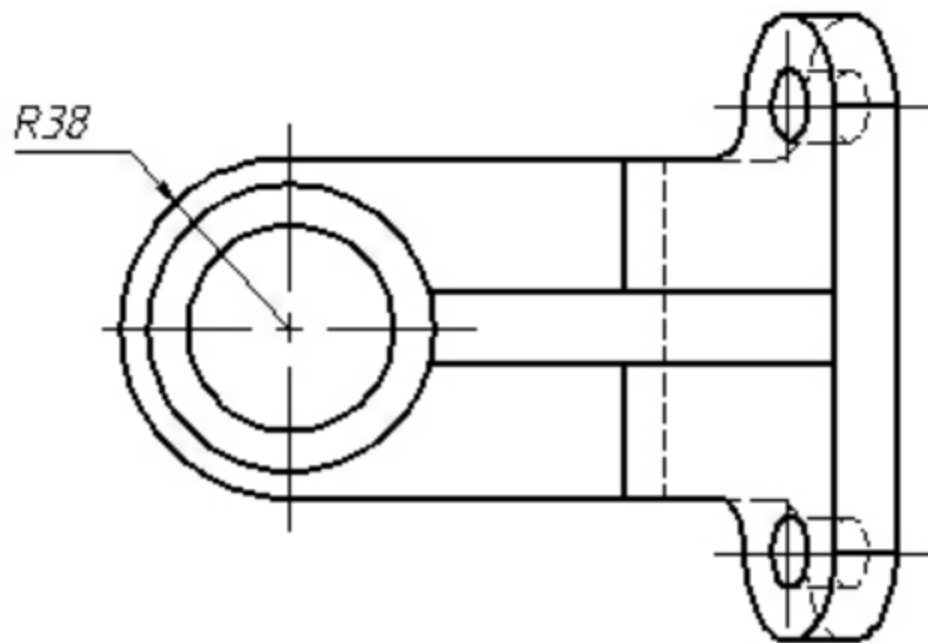
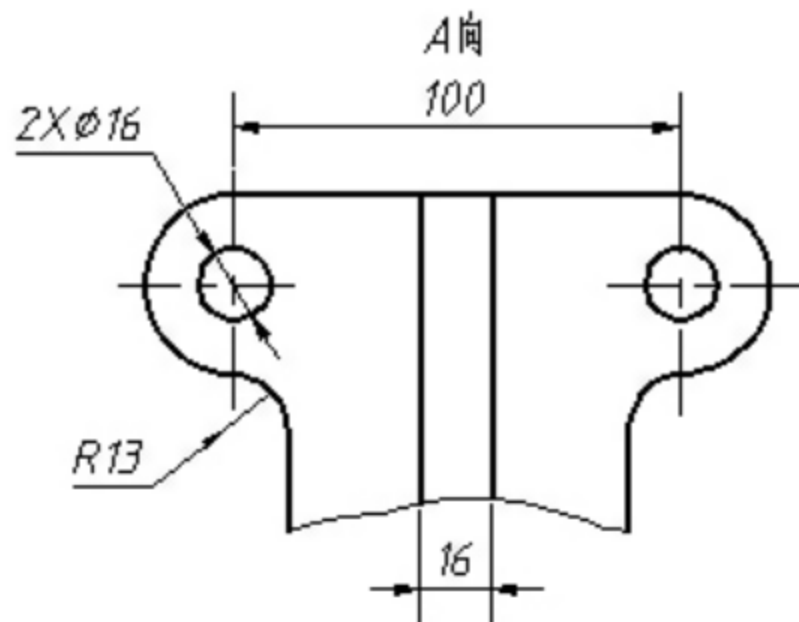
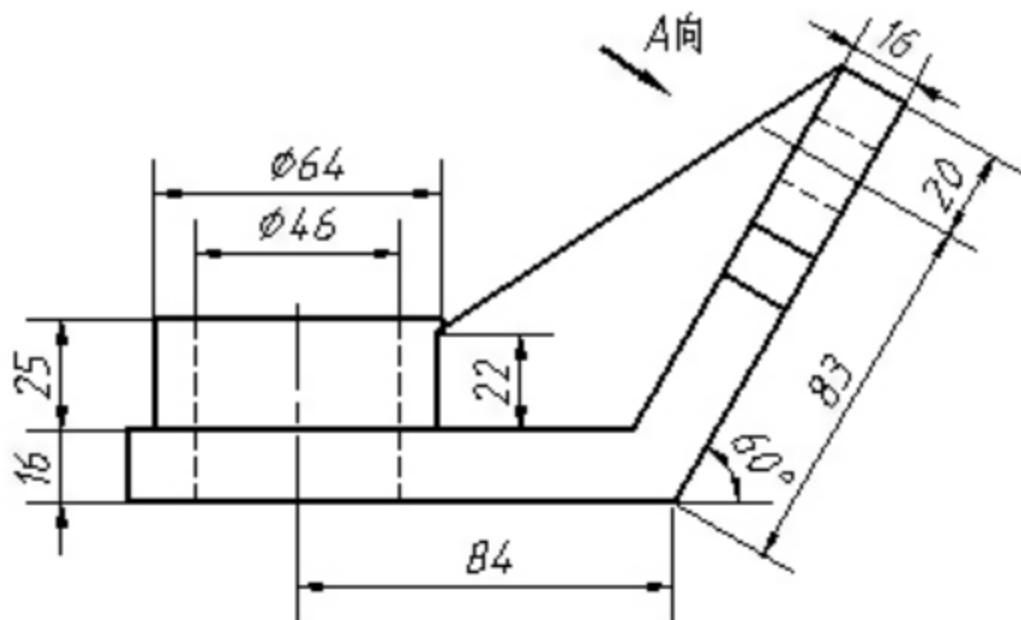


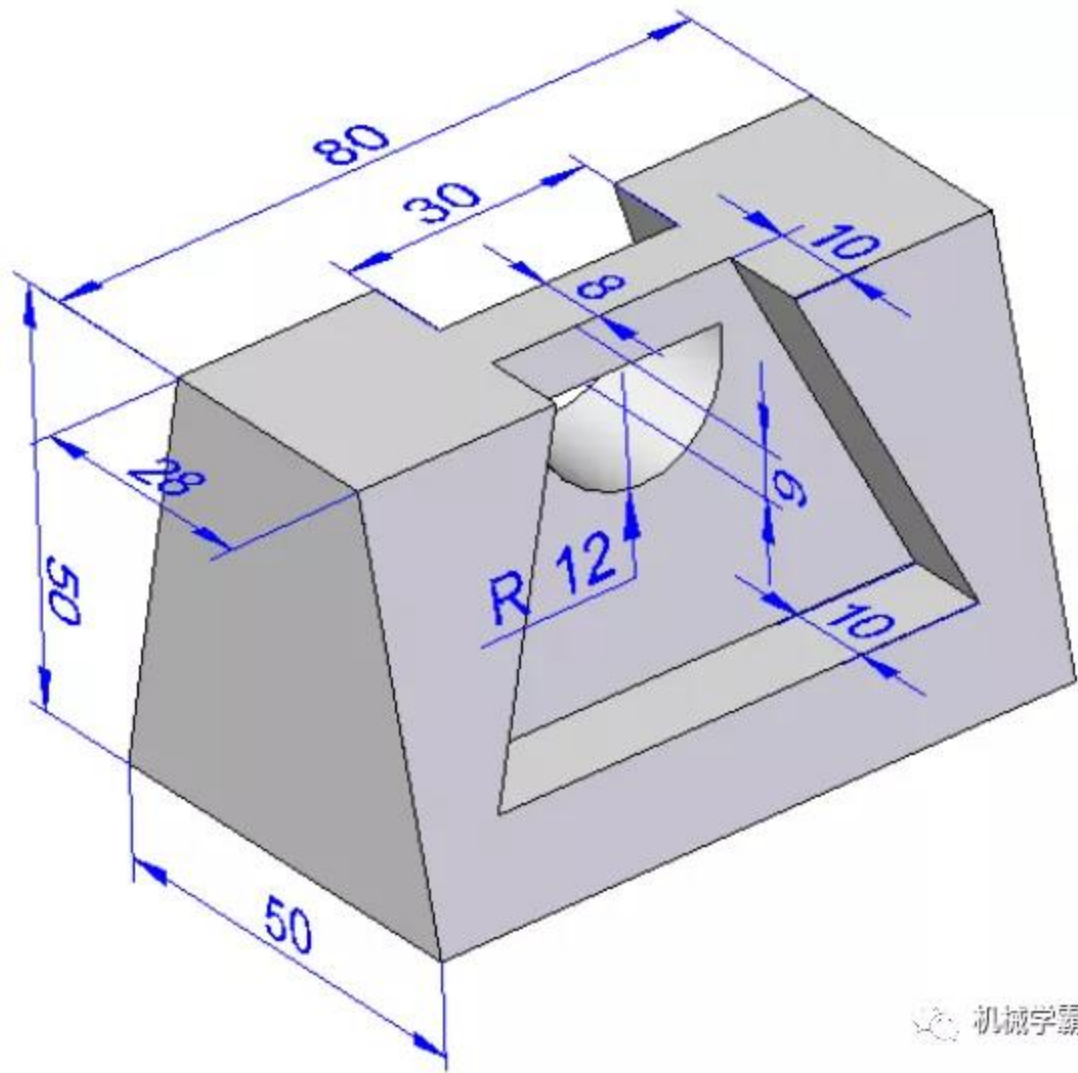


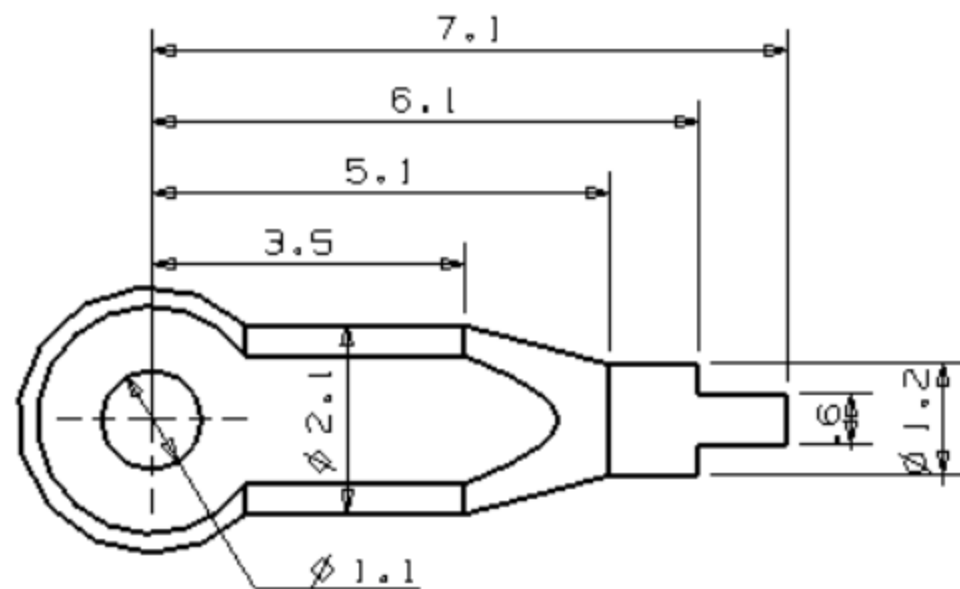
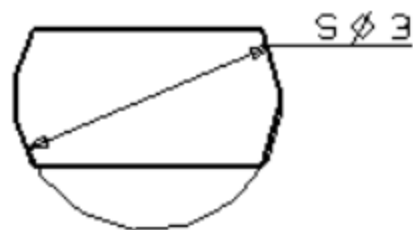
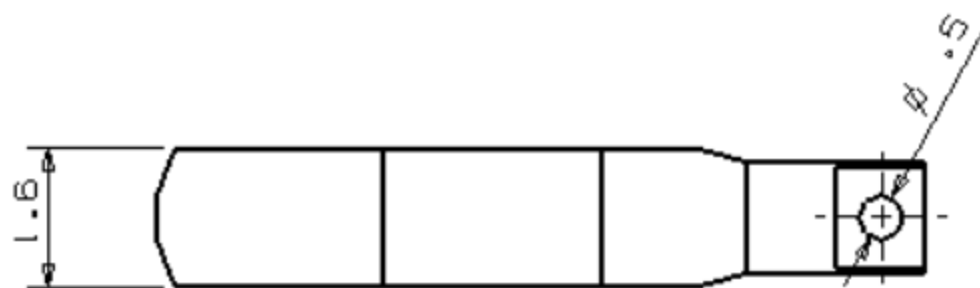


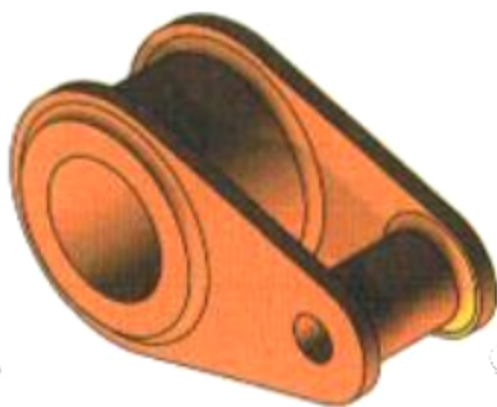
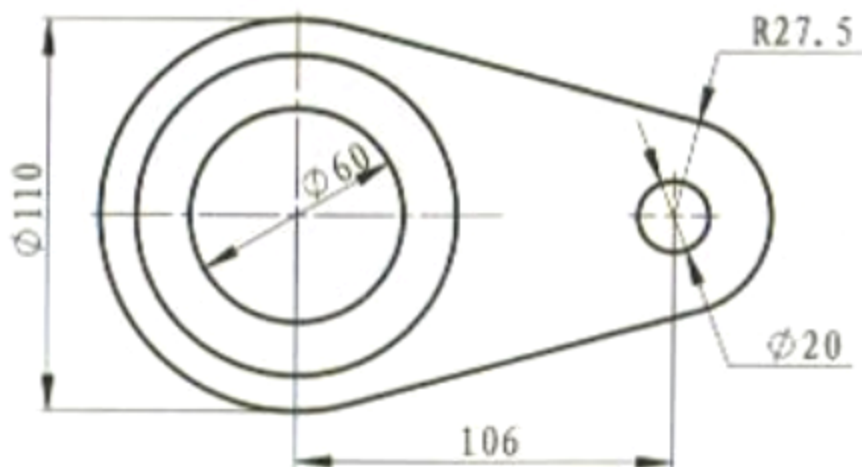
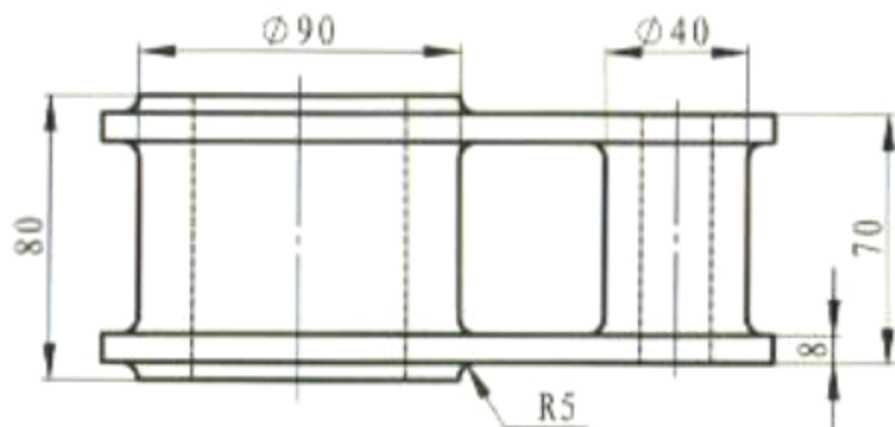












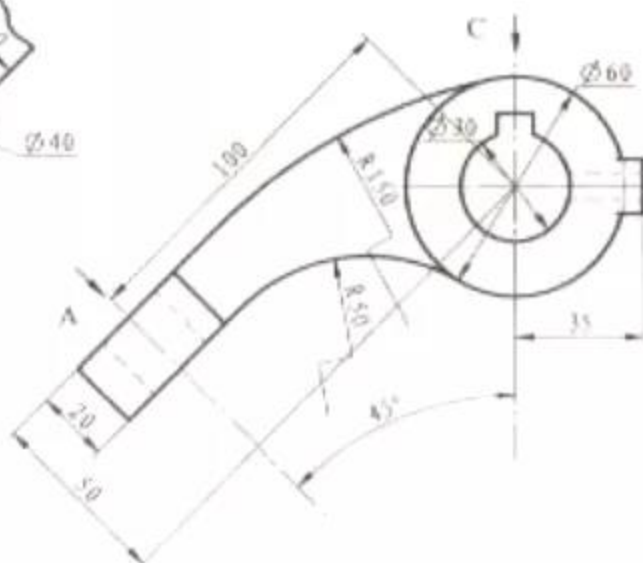
未标注圆角均为R1



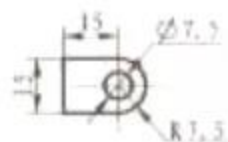
C



A

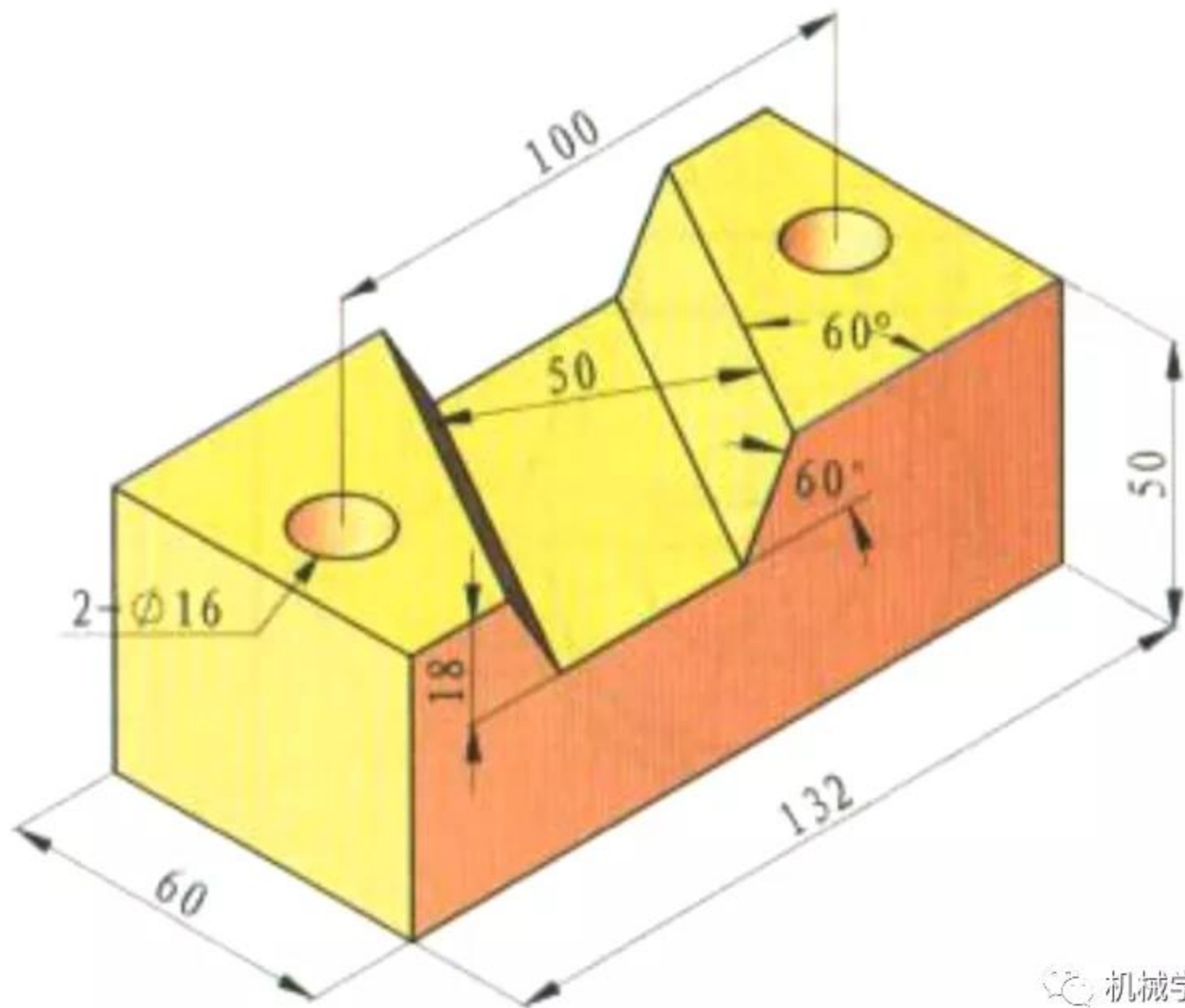


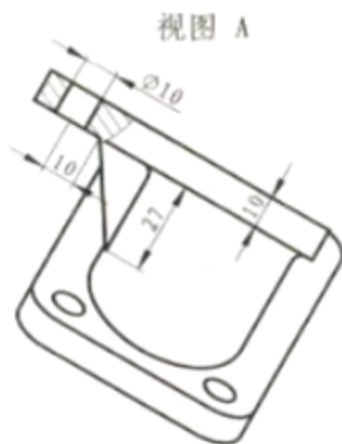
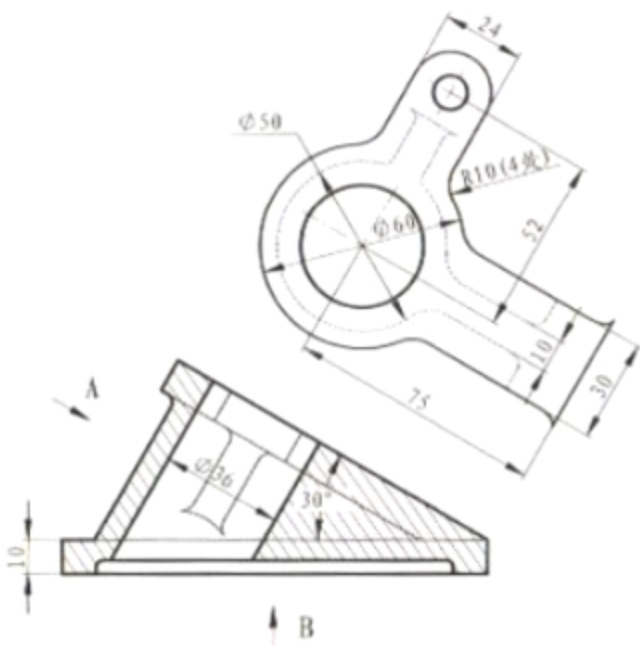
B



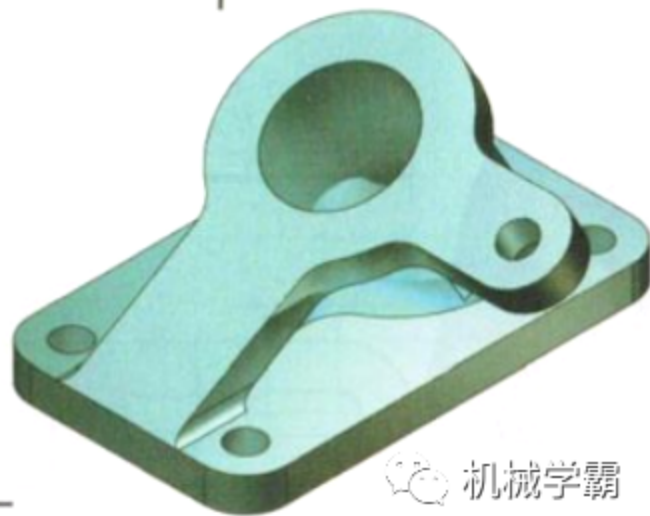
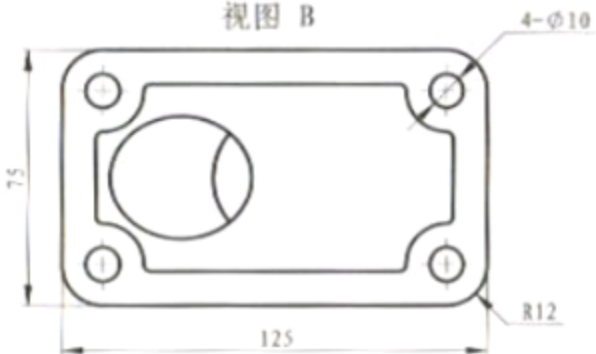
B





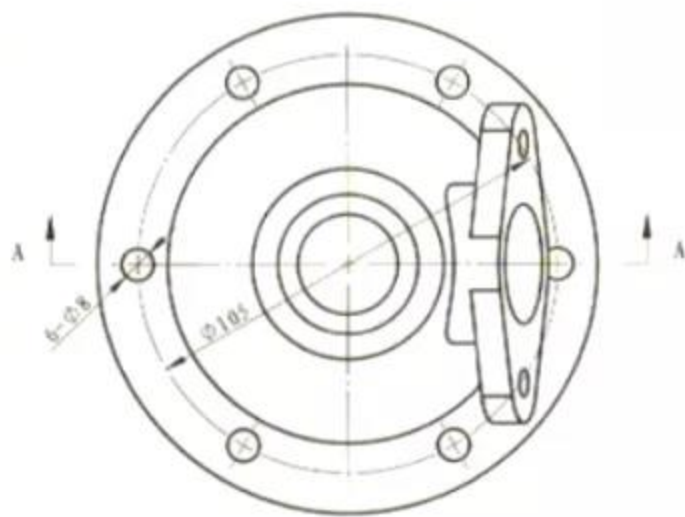
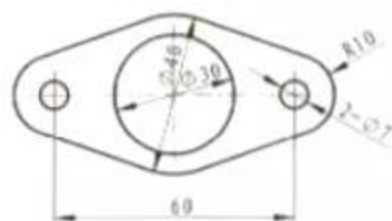
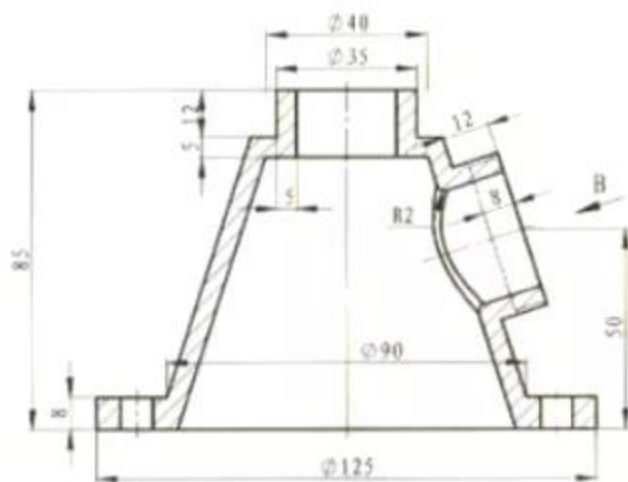


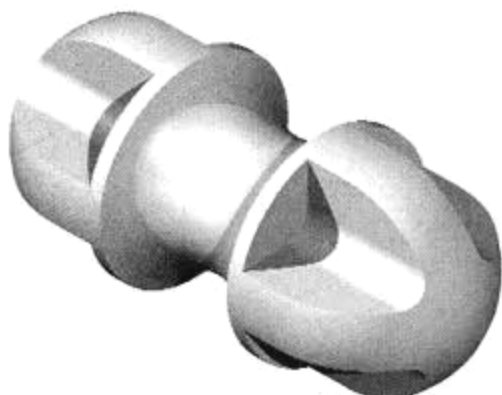
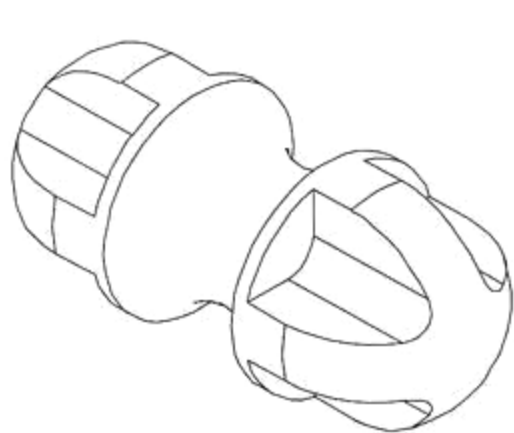
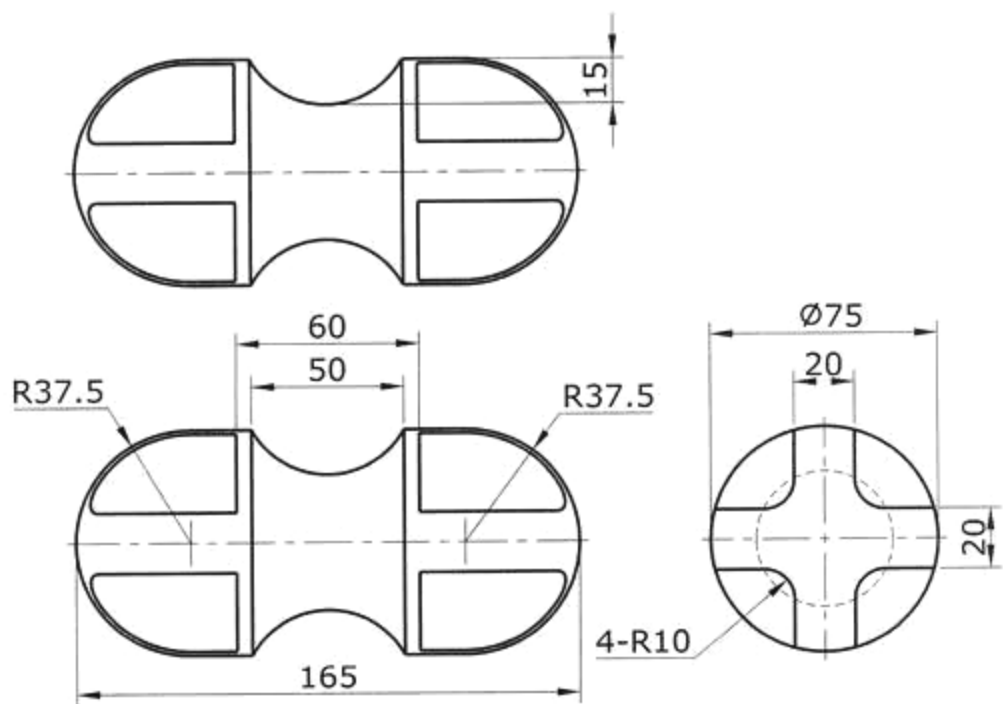
视图 B



A-A

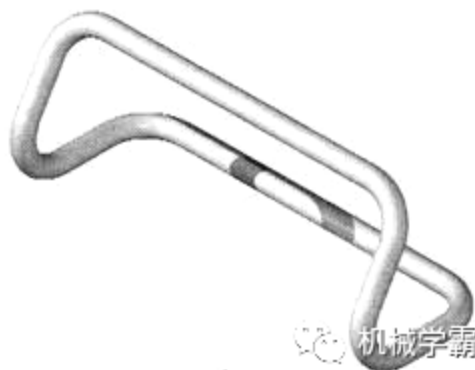
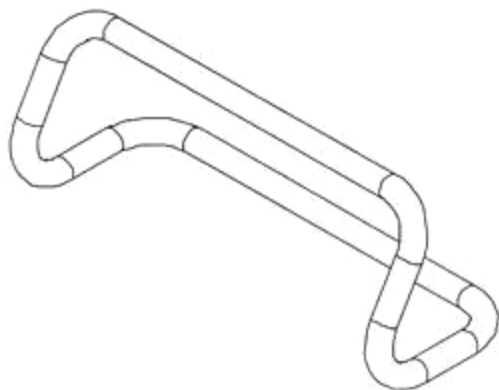
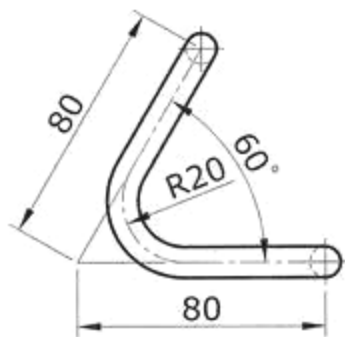
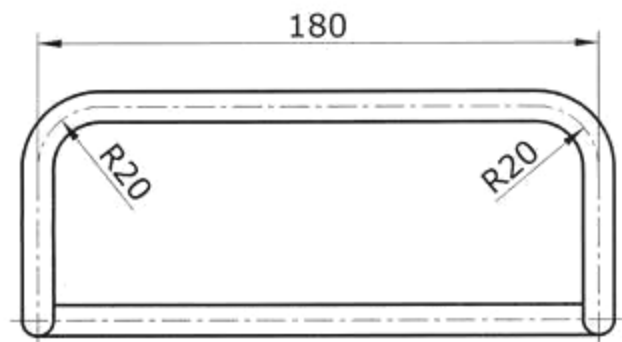
视图 B 旋转

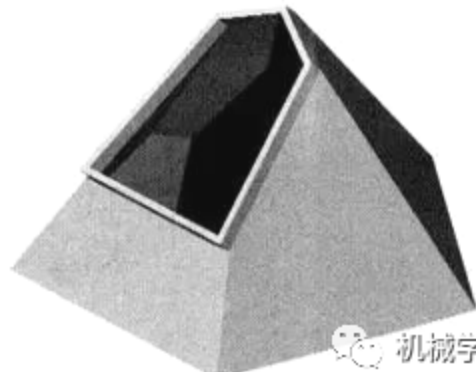
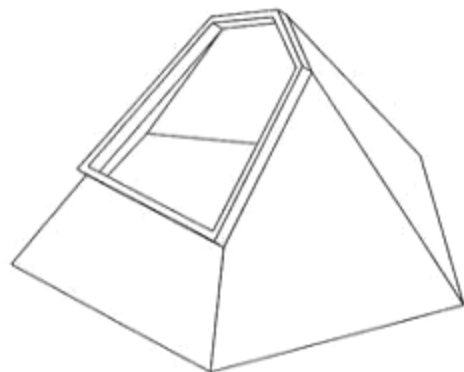
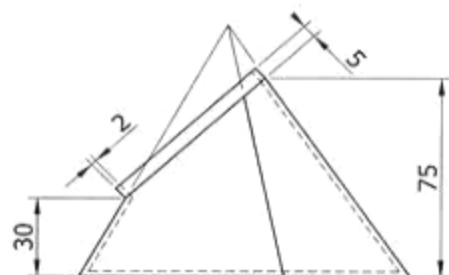
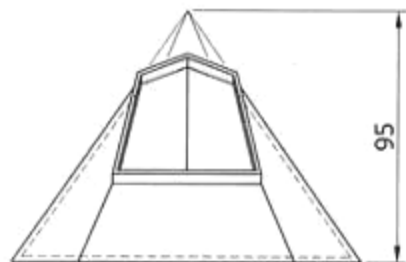
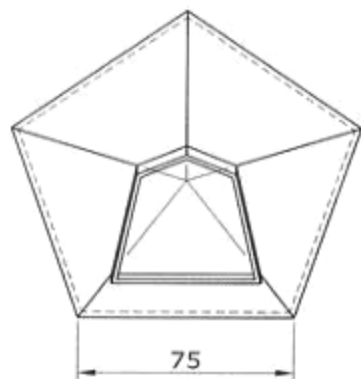


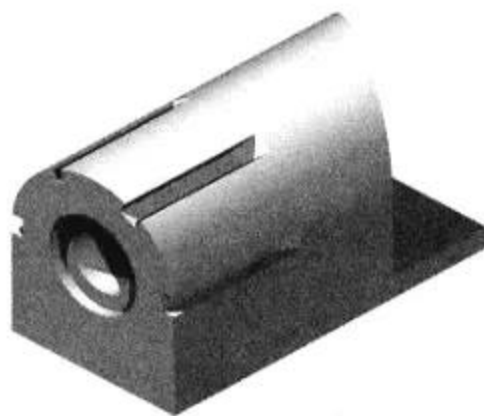
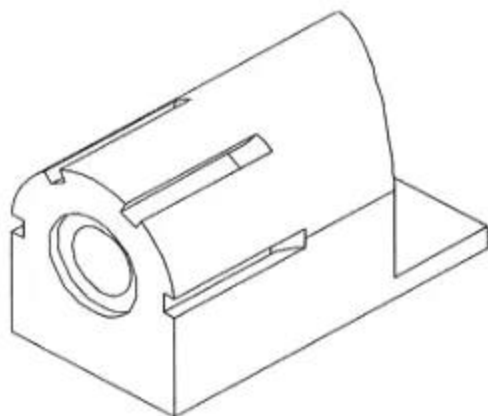
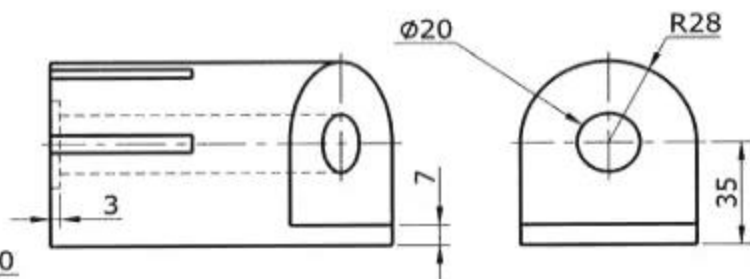
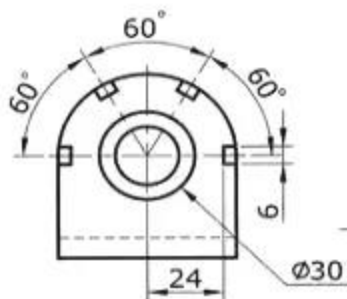
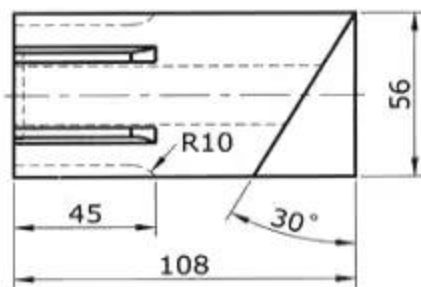


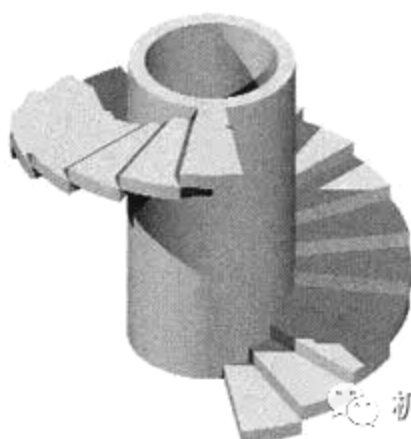
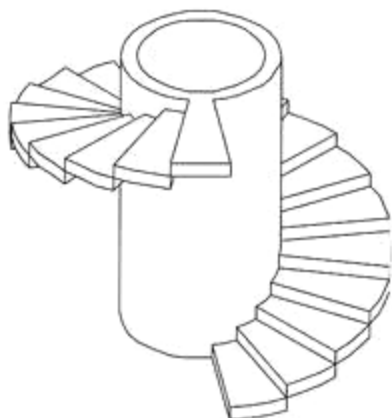
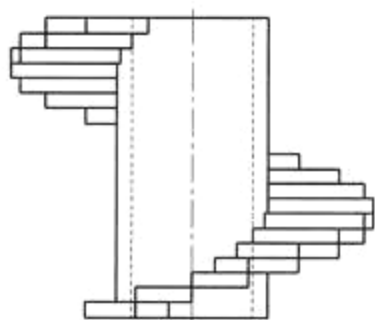
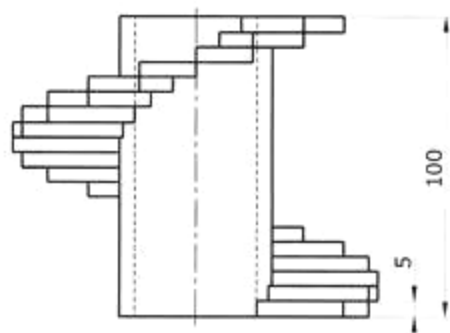
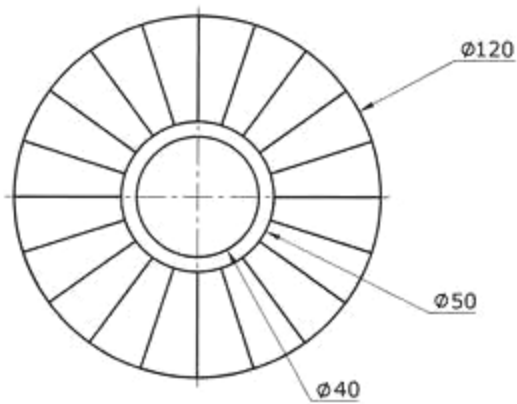


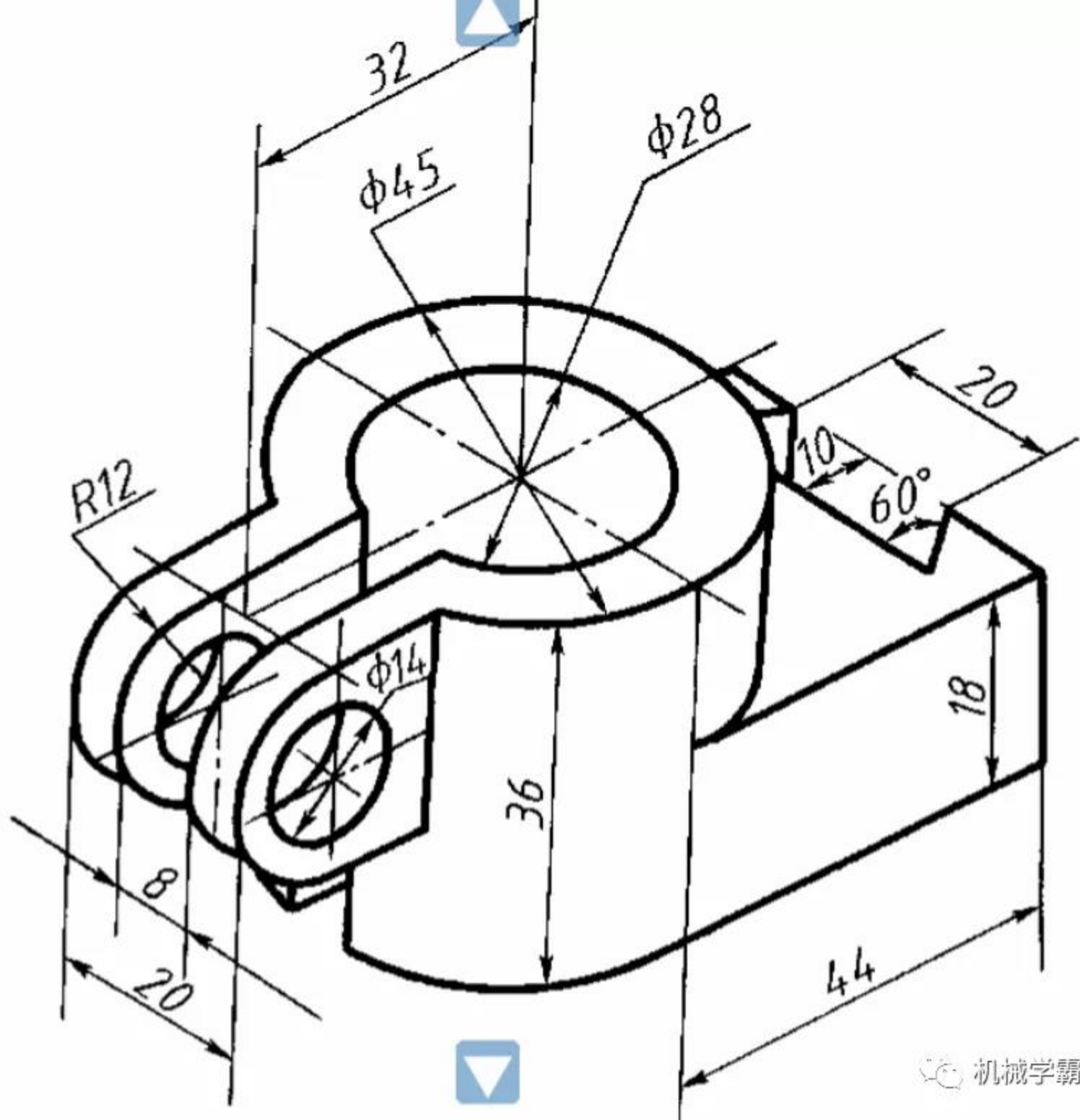
附注：圆管直径 = 10

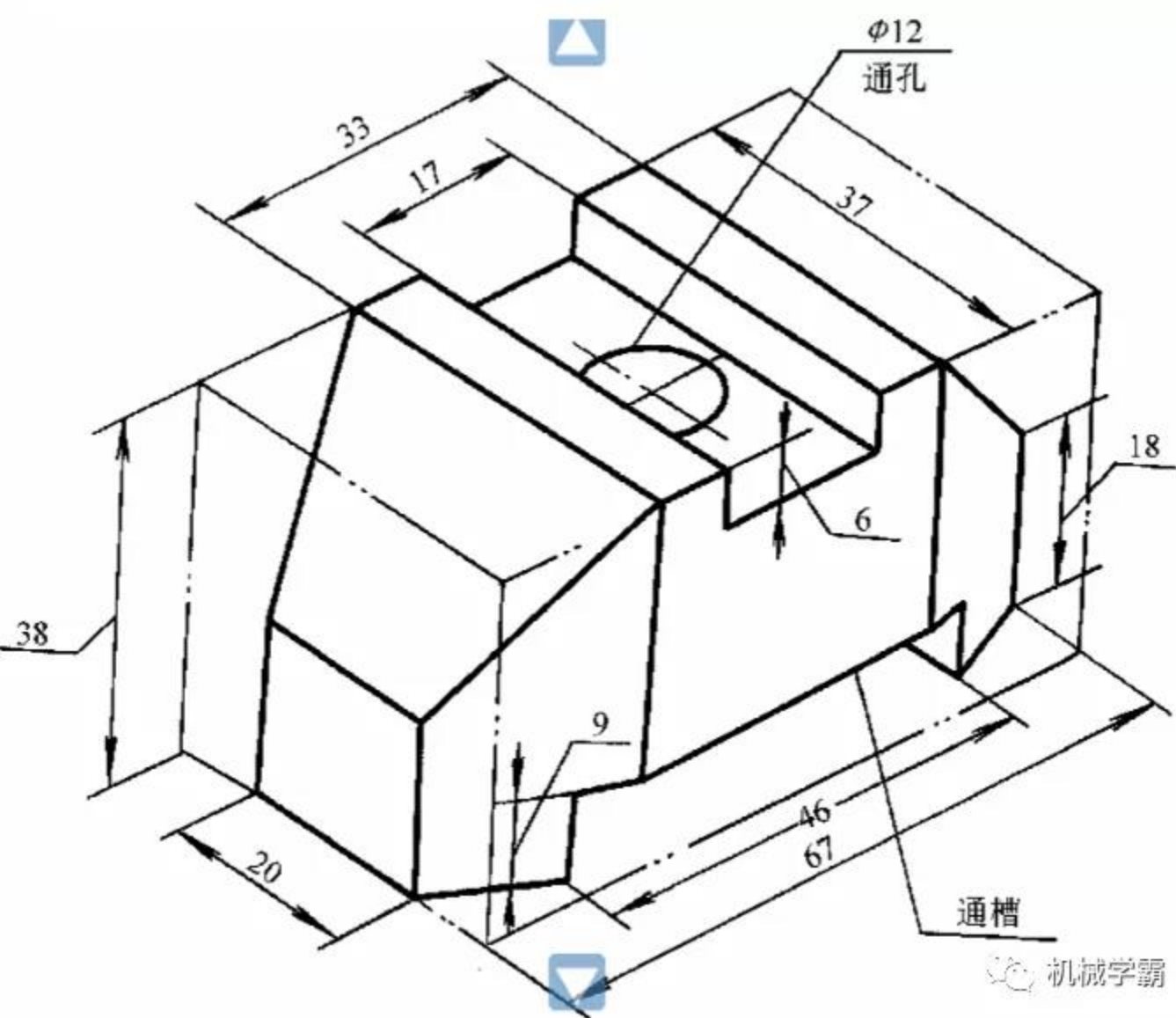


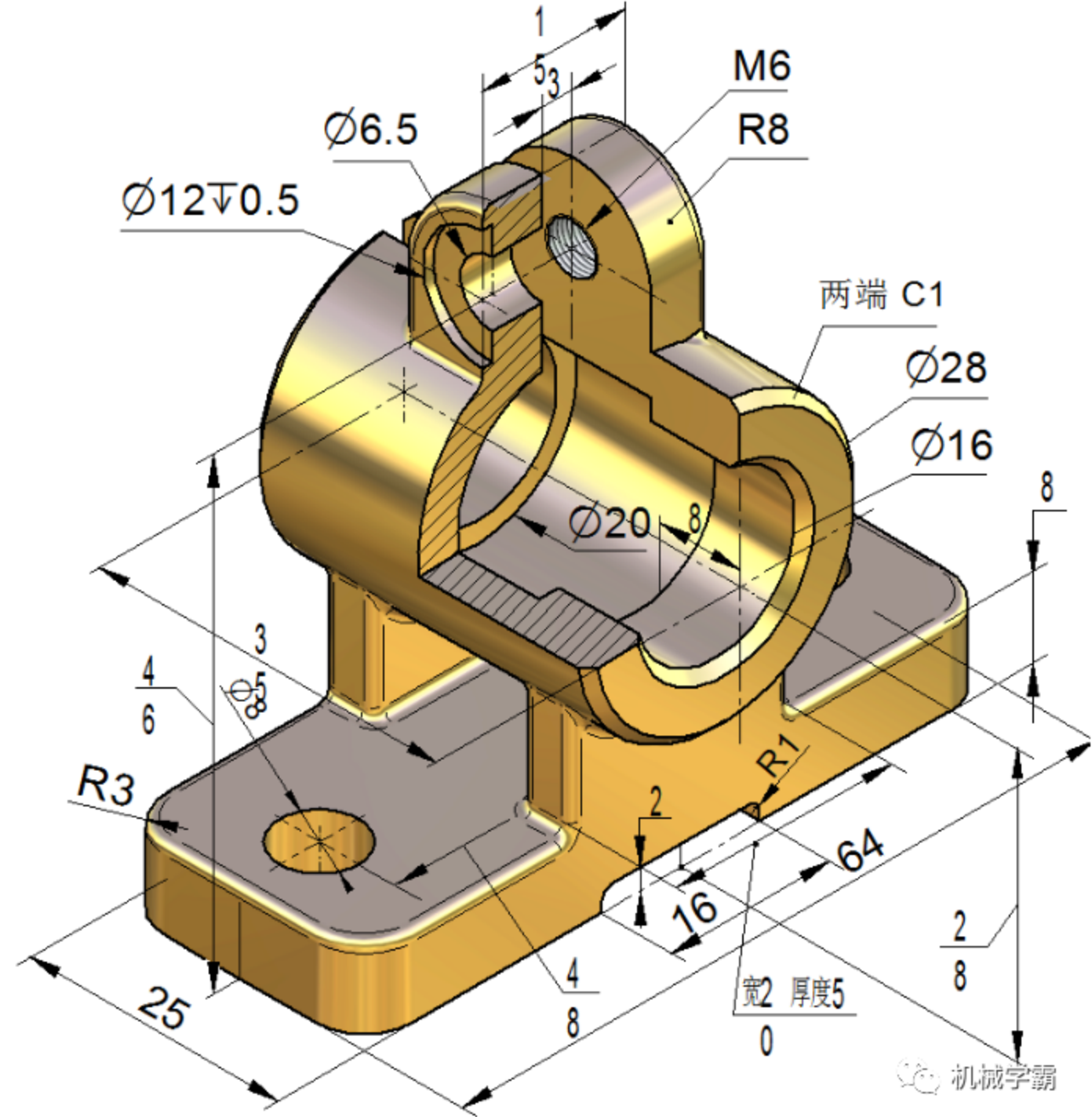




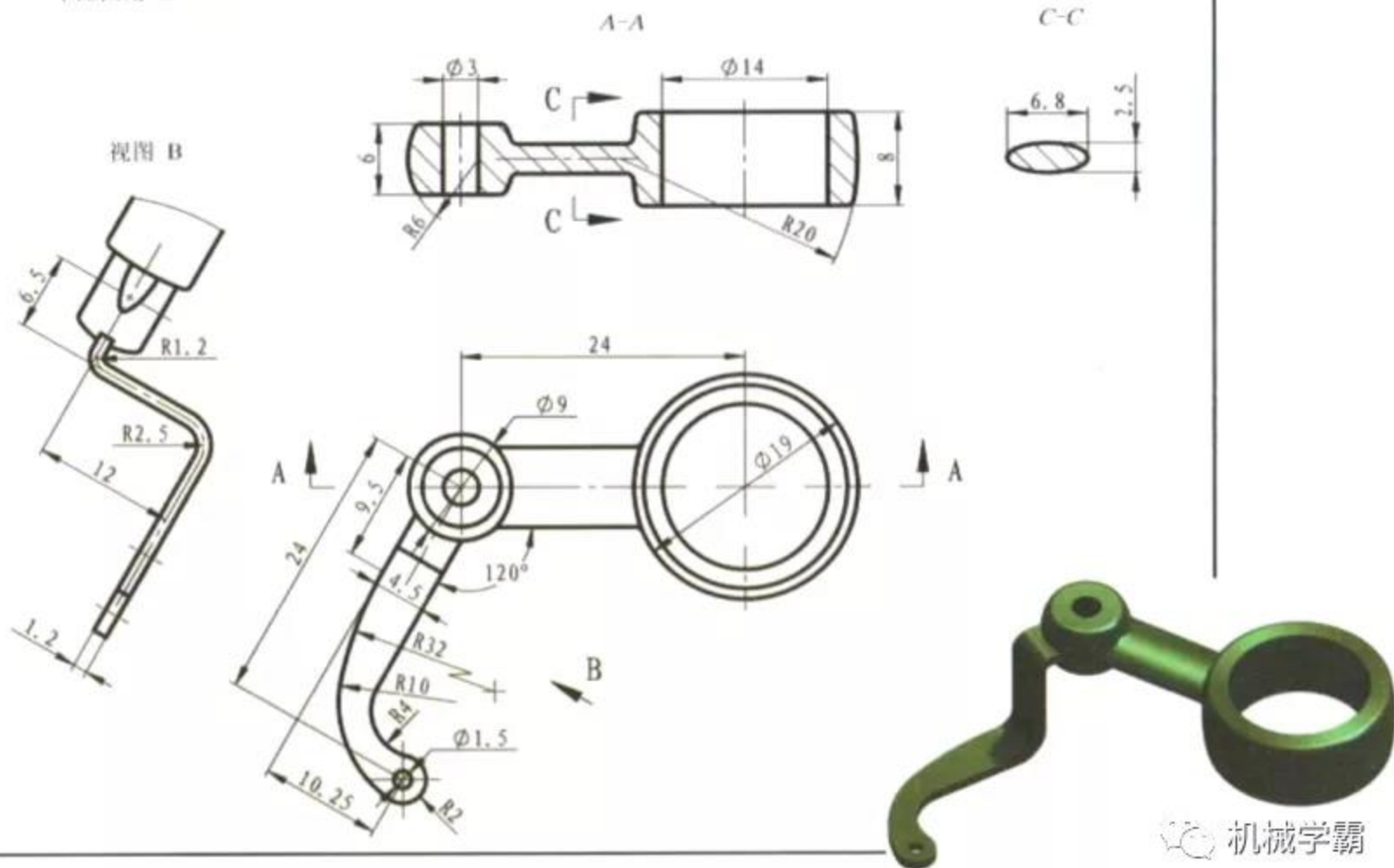


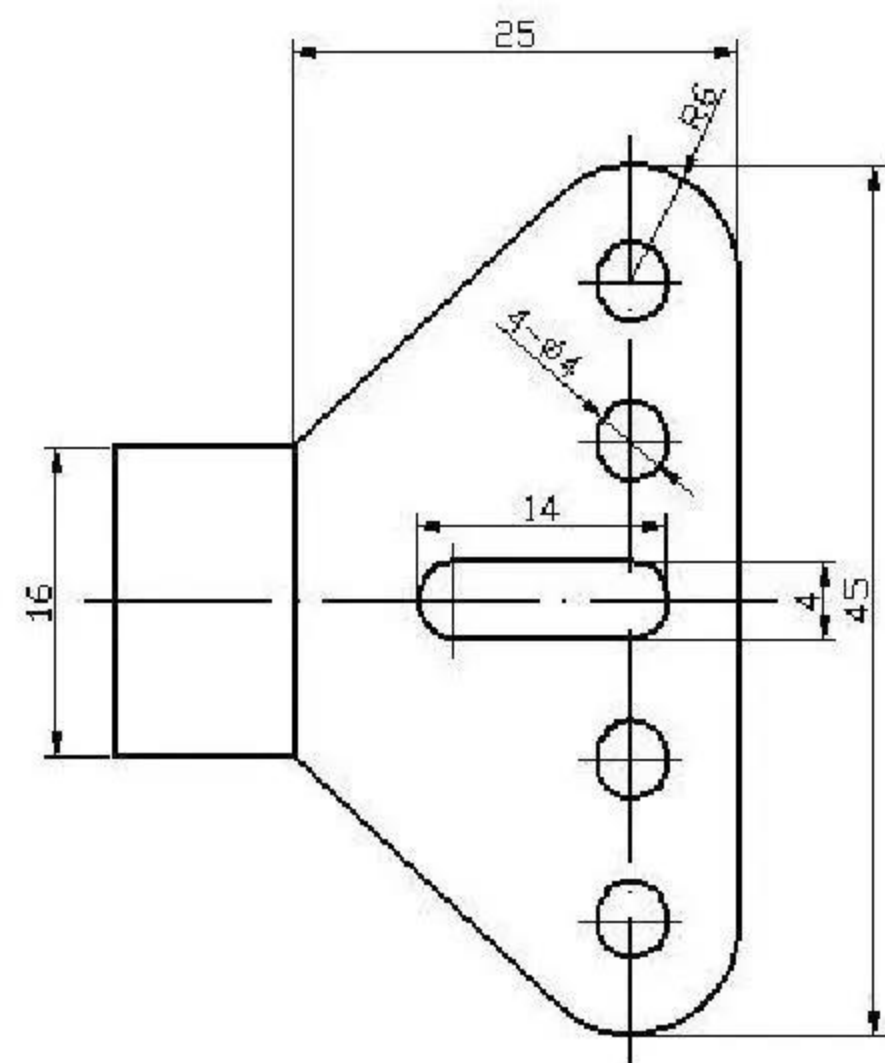
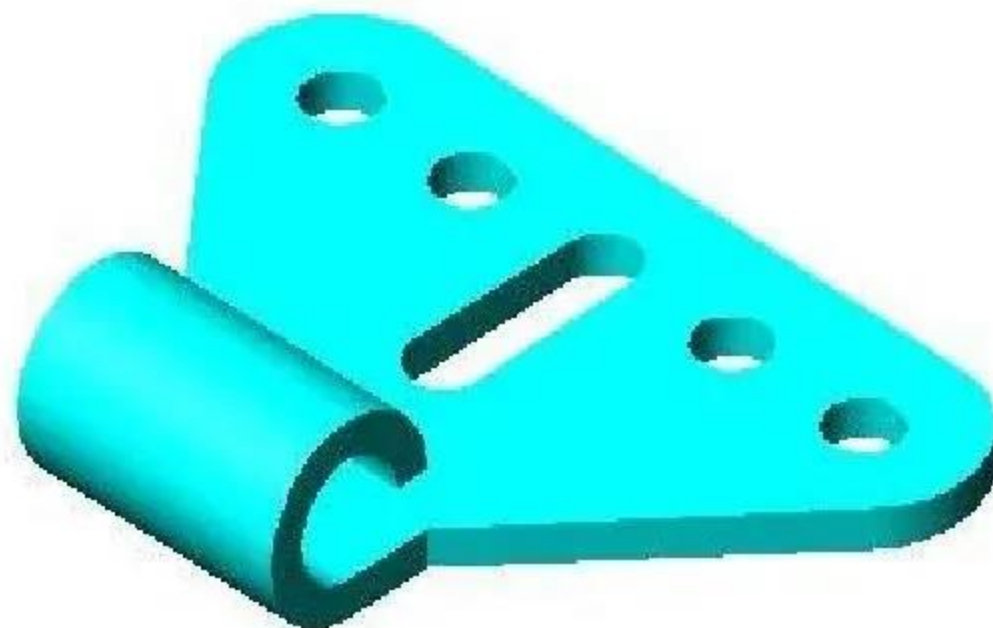
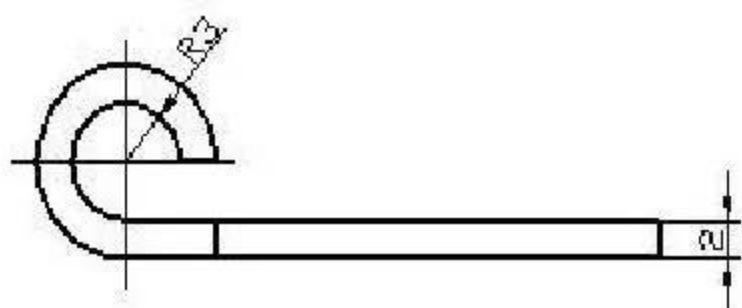


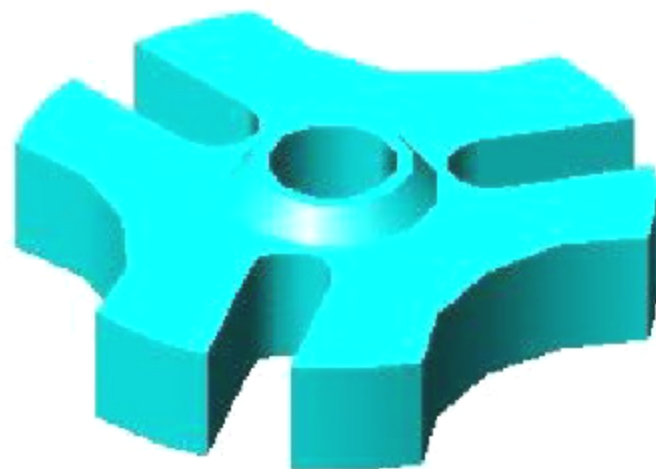
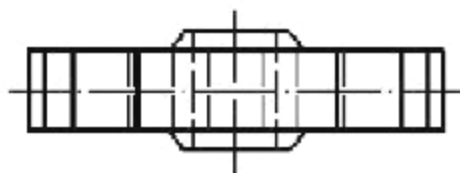




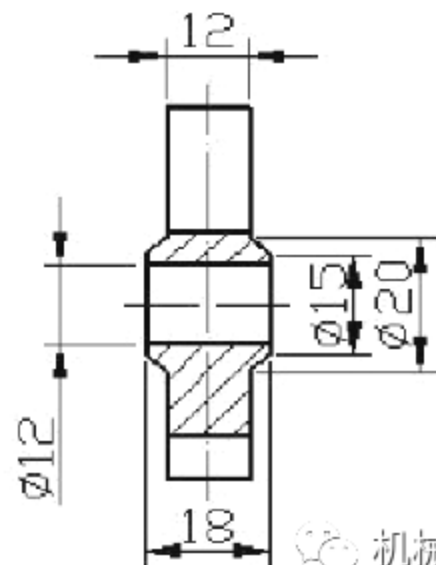
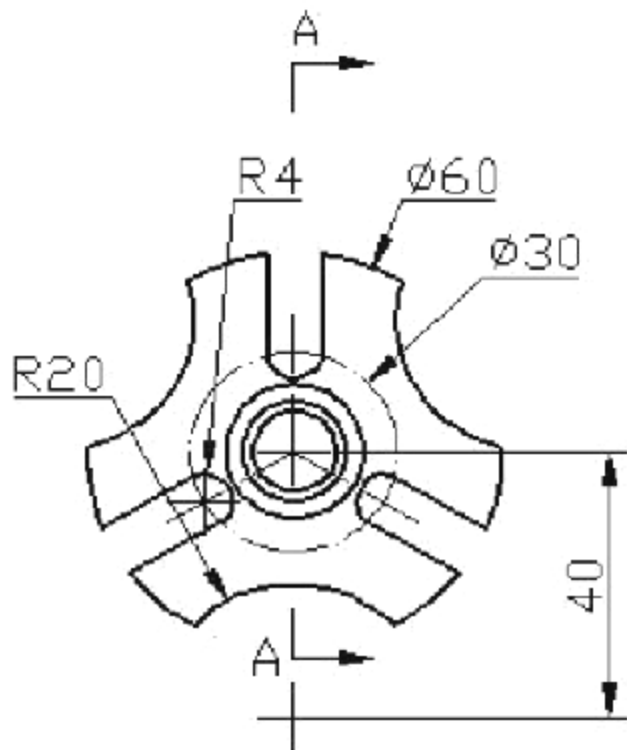
未注圆角R2~R6

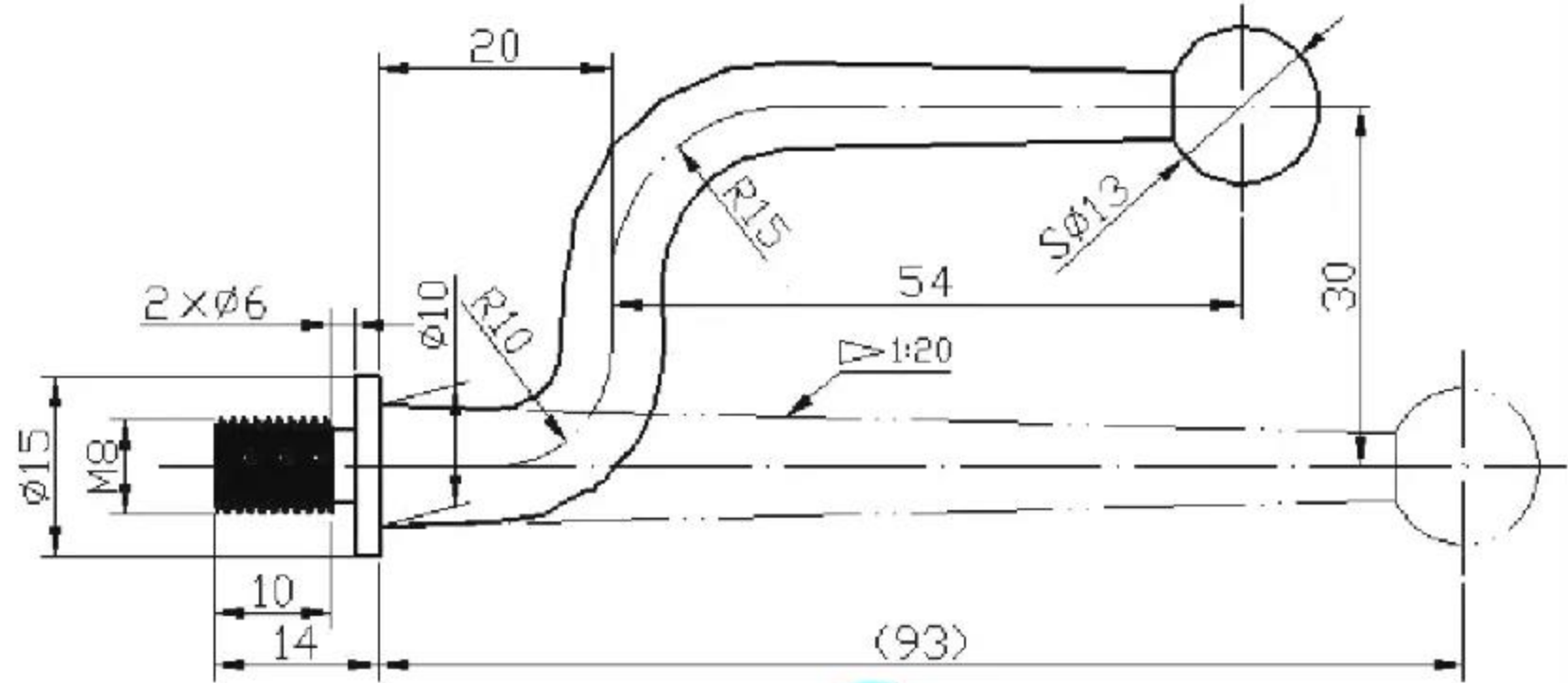


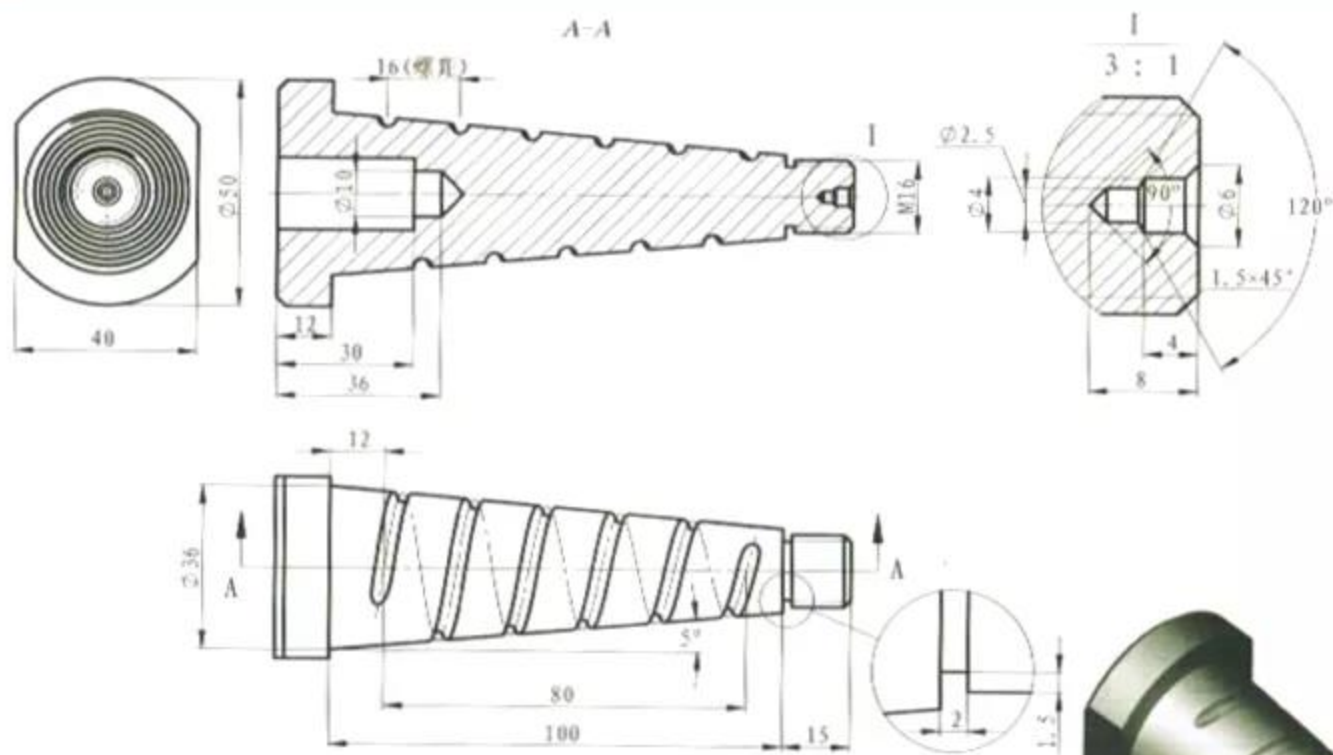


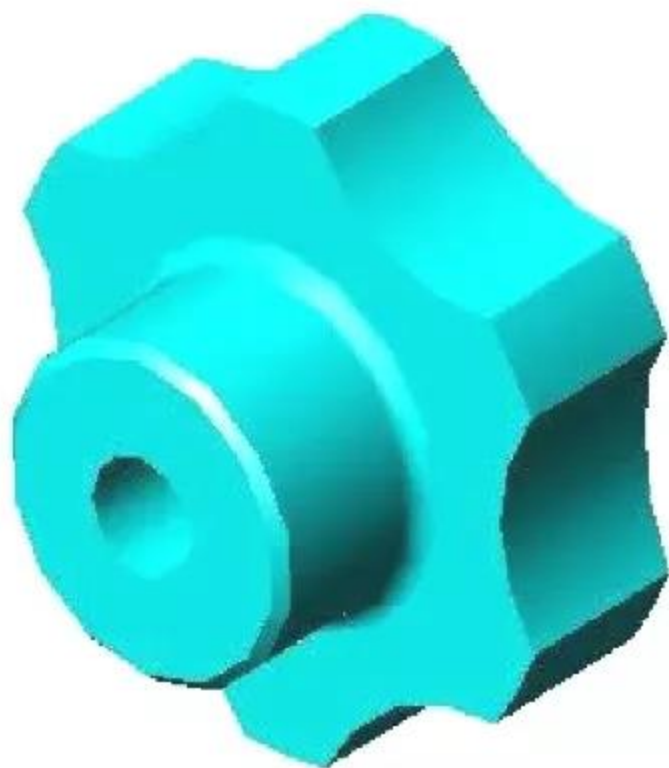
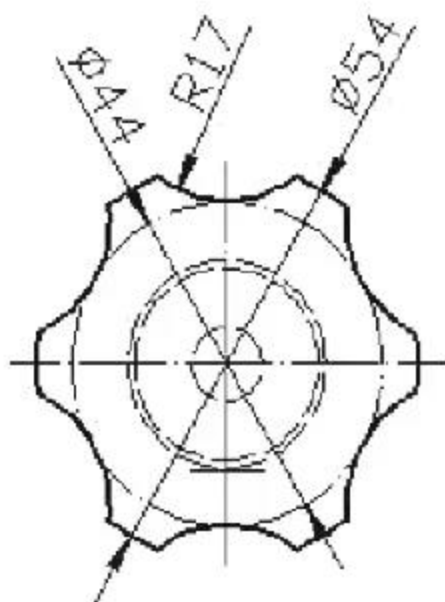
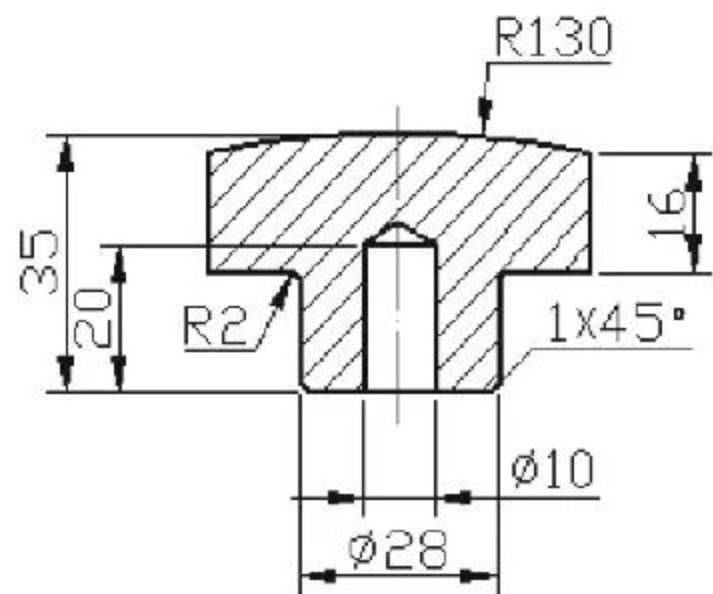


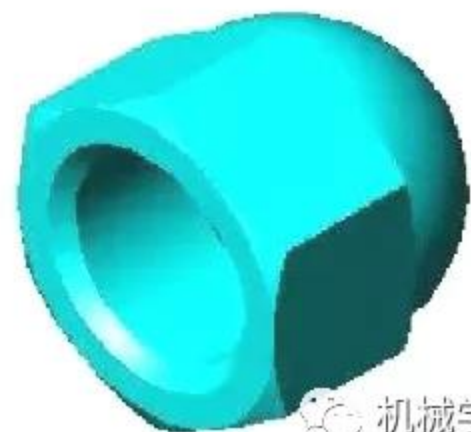
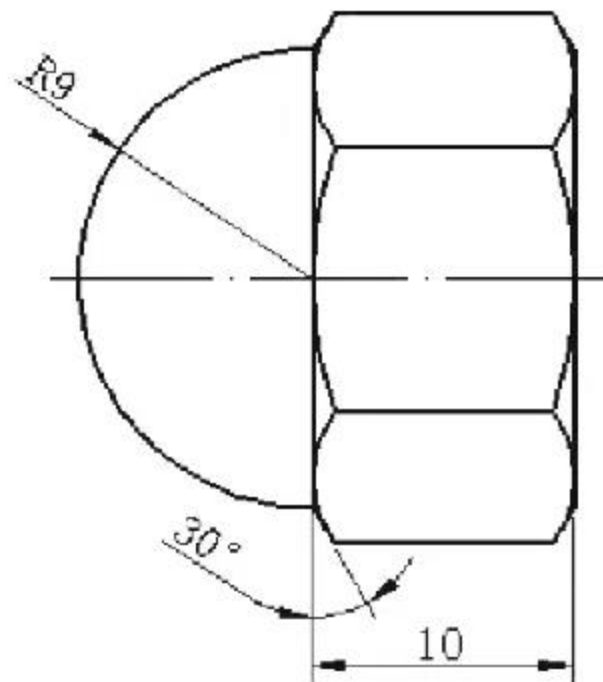
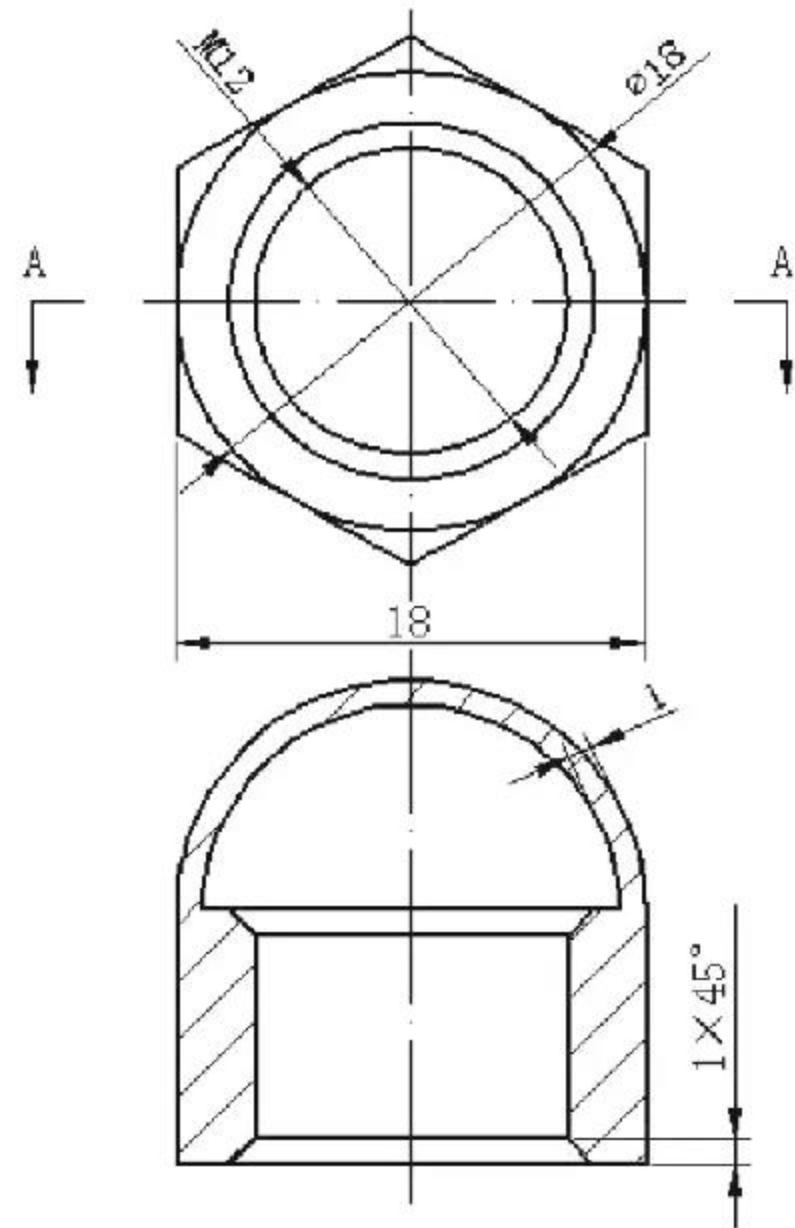
A-A

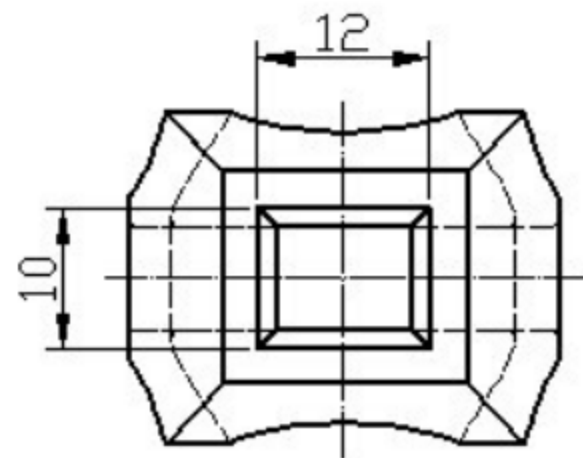
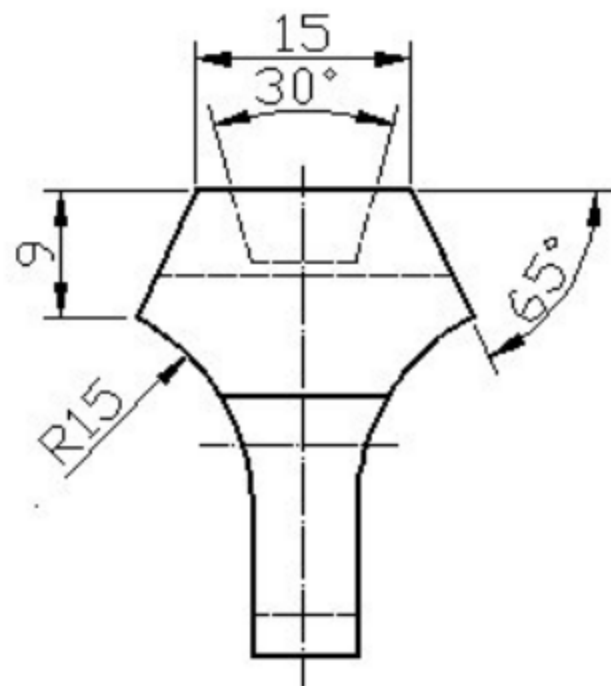
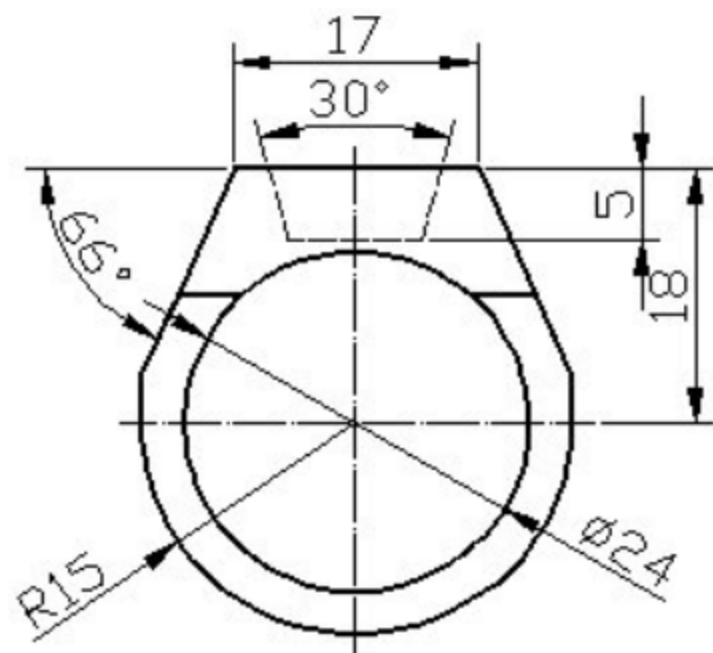


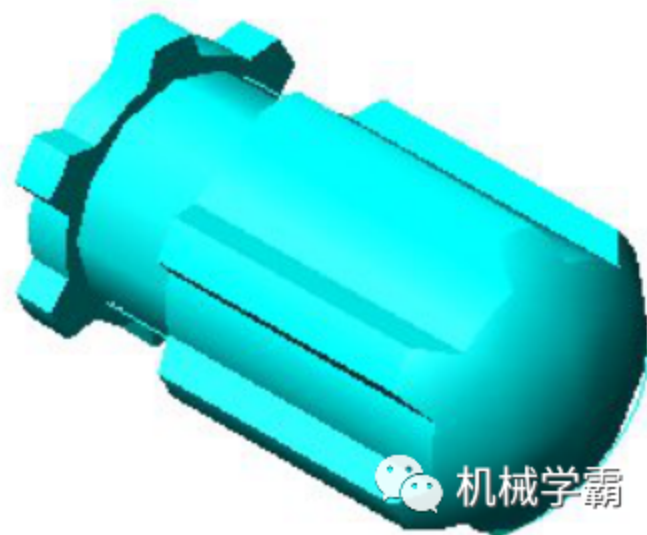
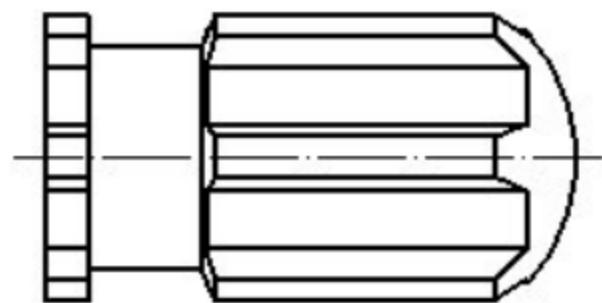
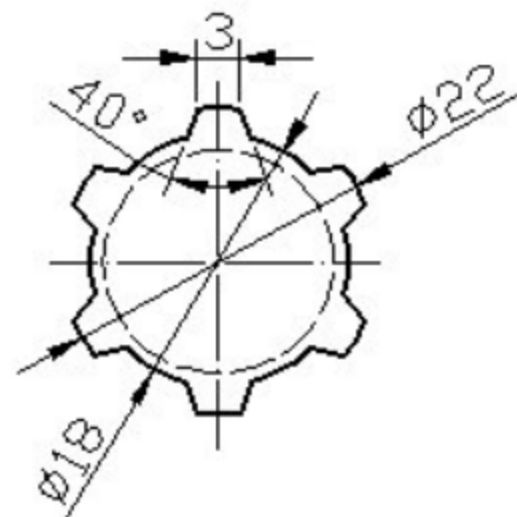
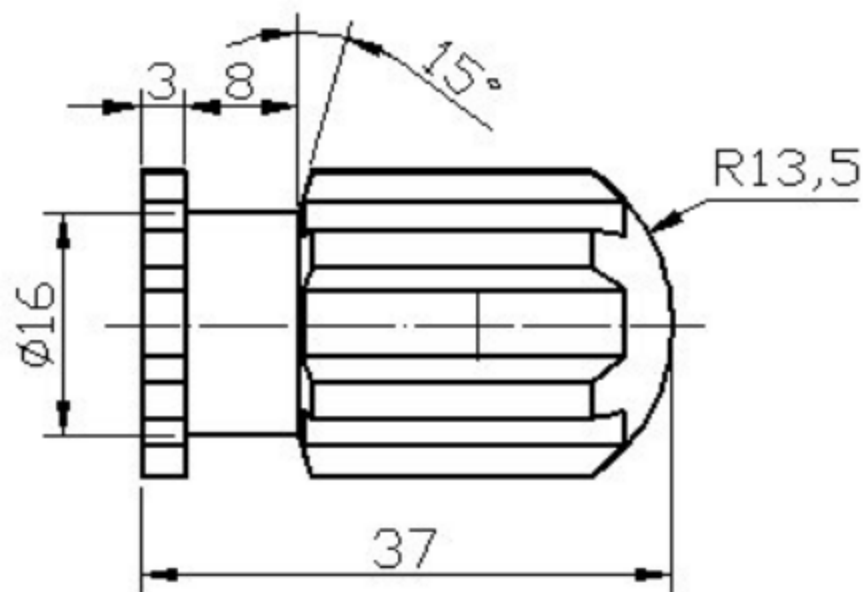


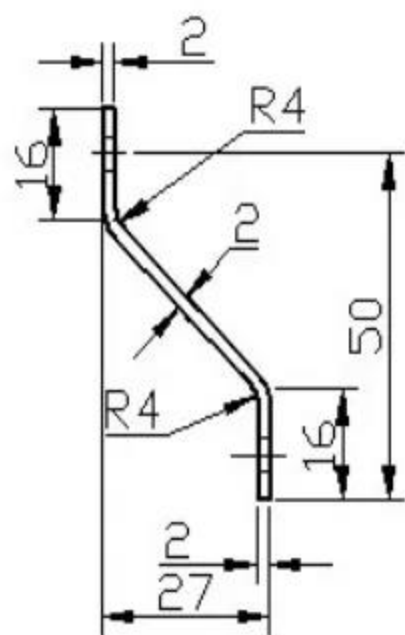
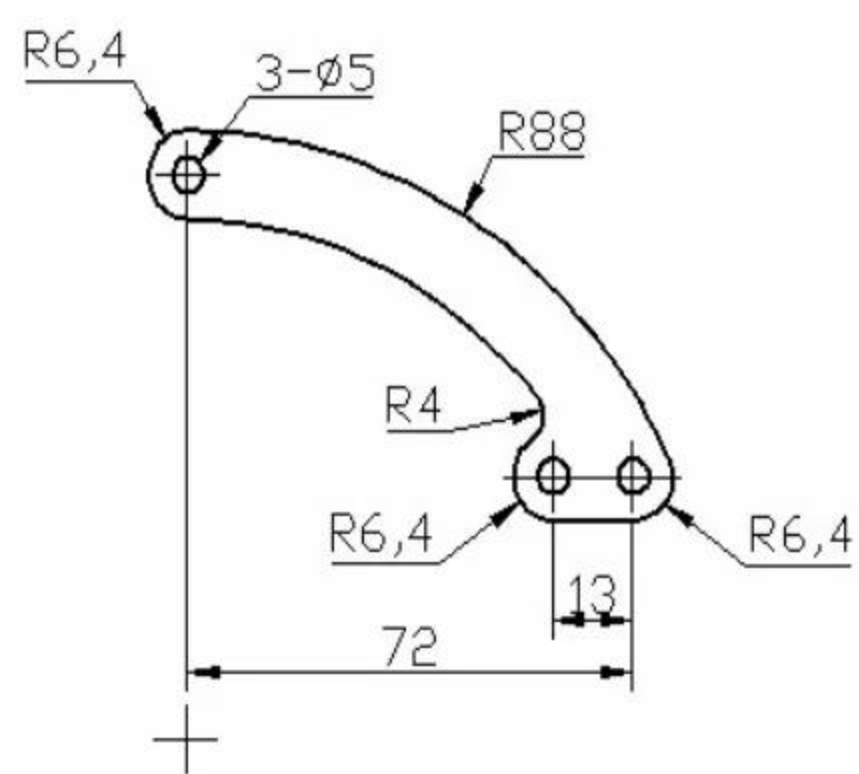


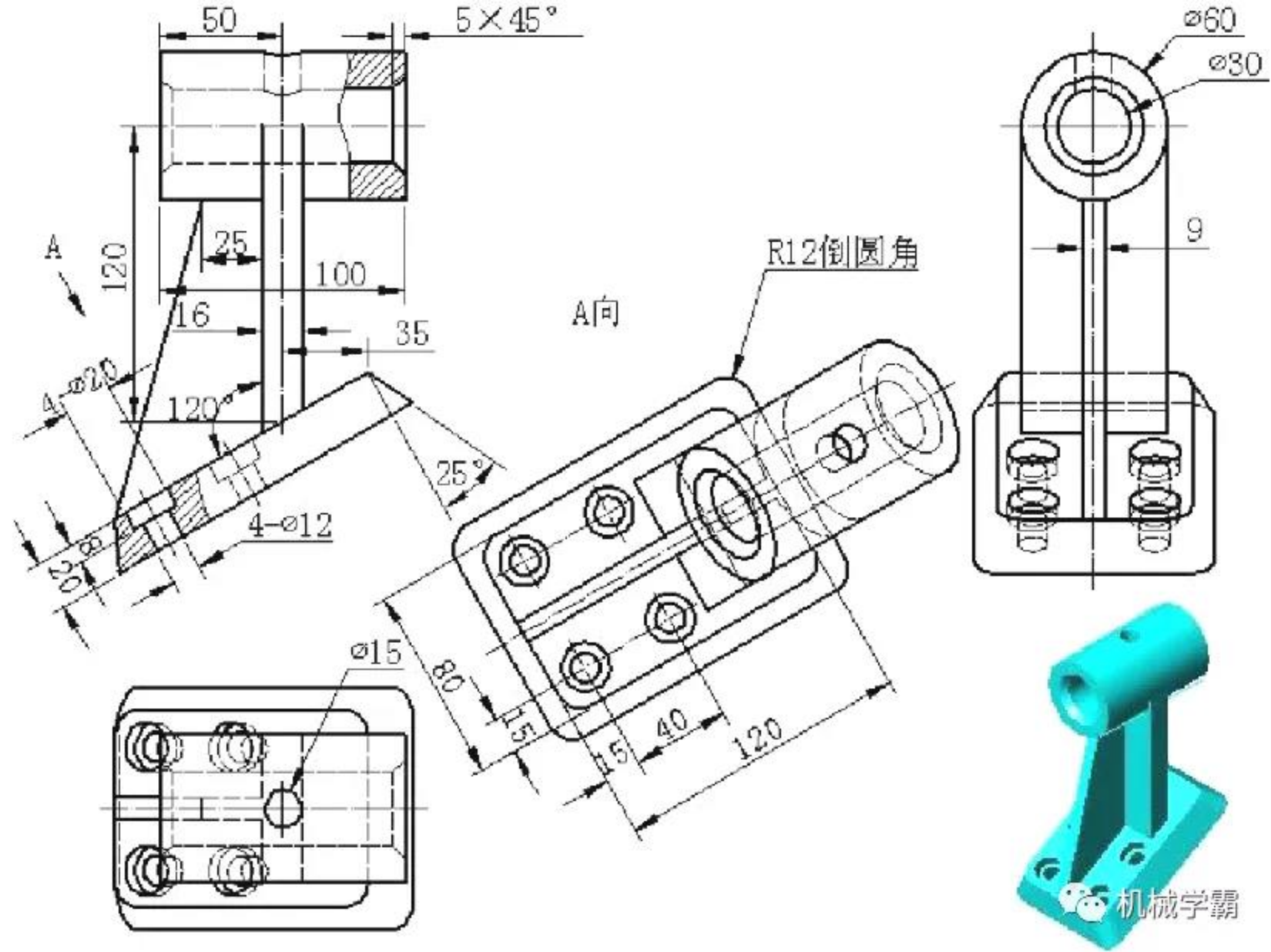


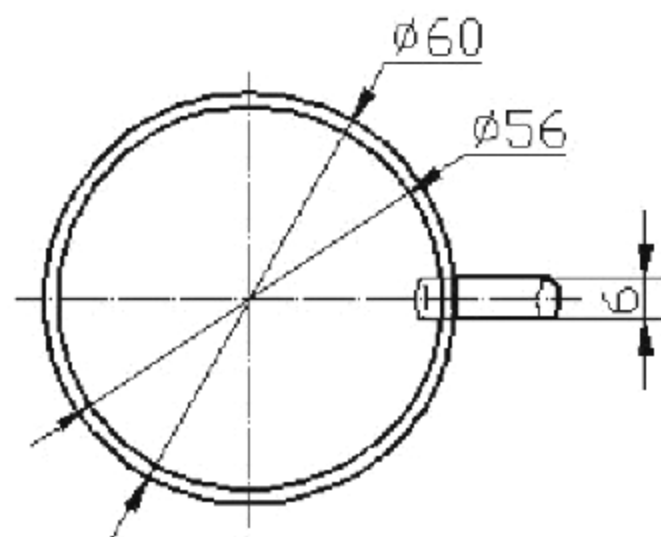
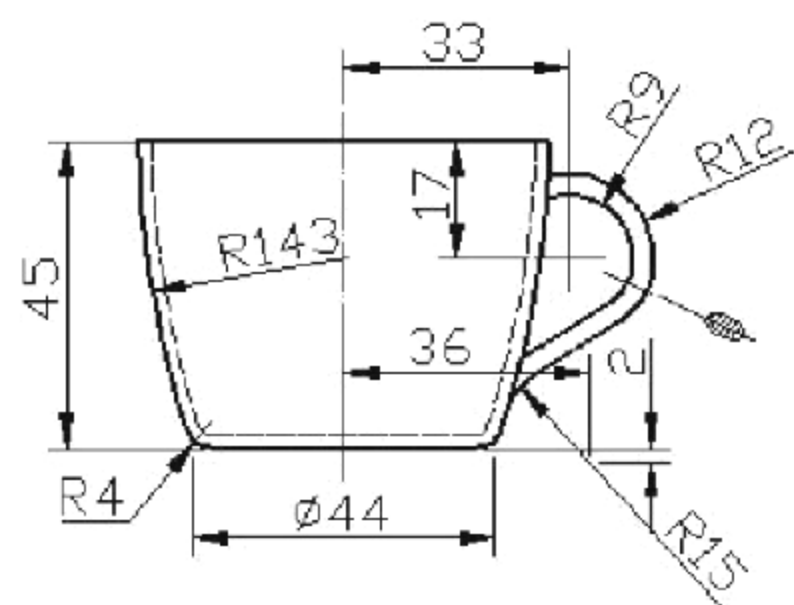


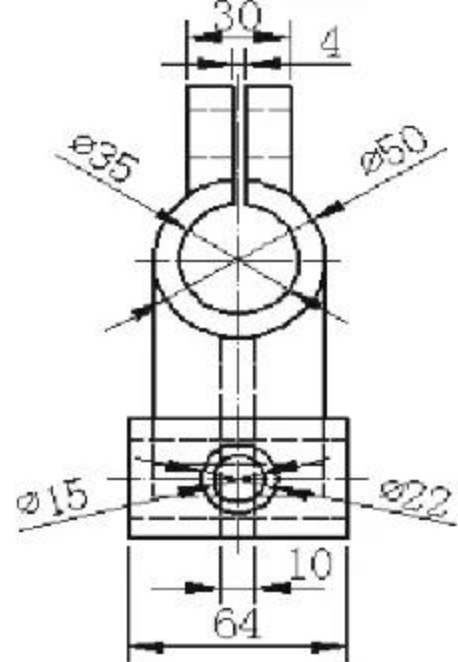
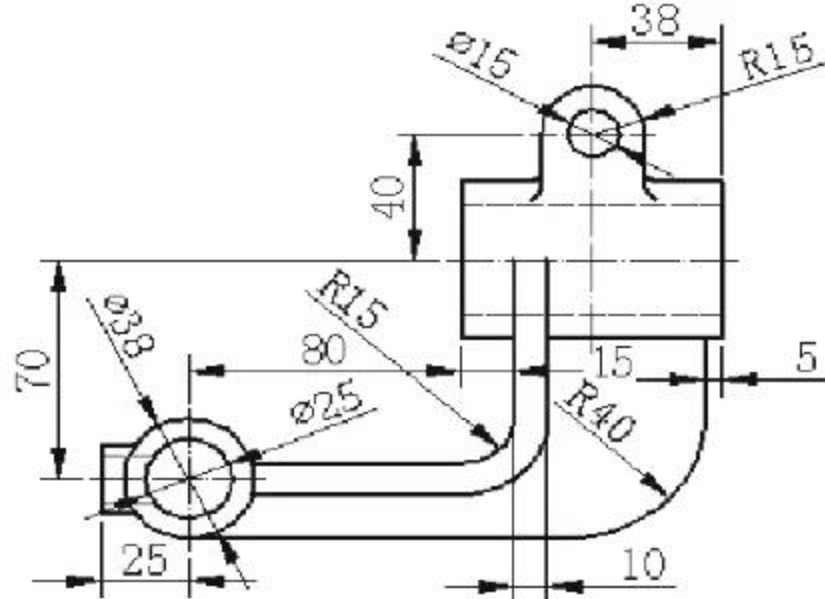




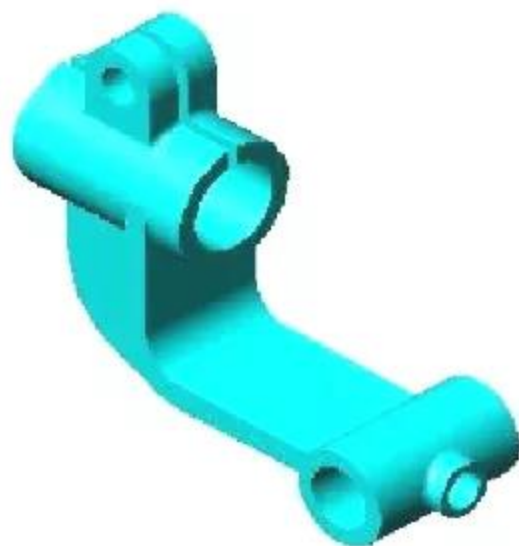




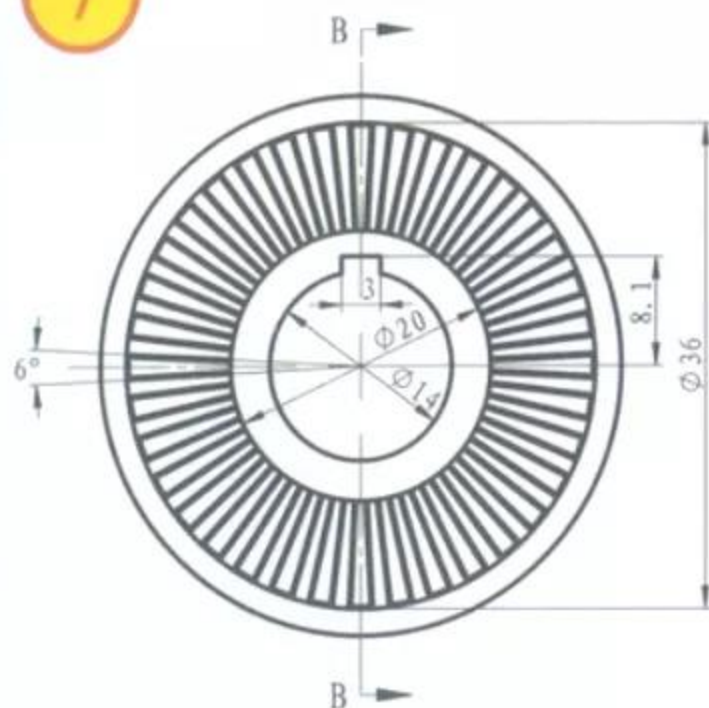




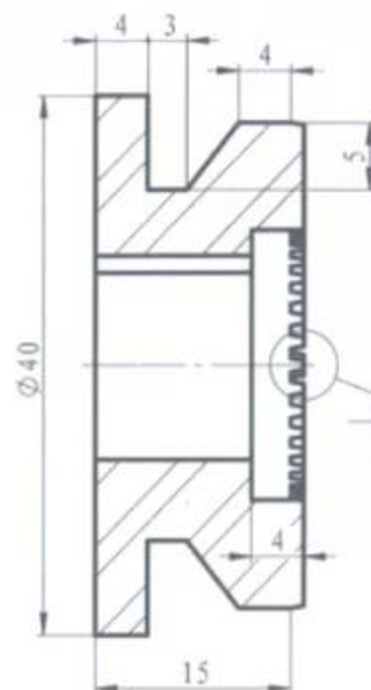
注：未注圆角均为R3



7



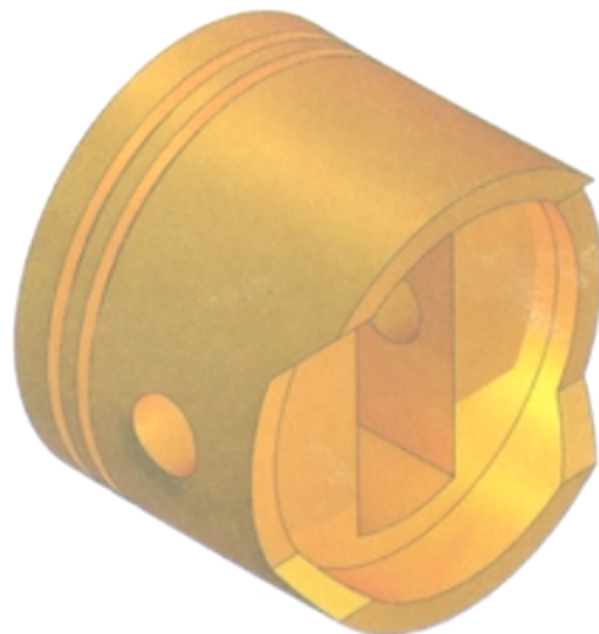
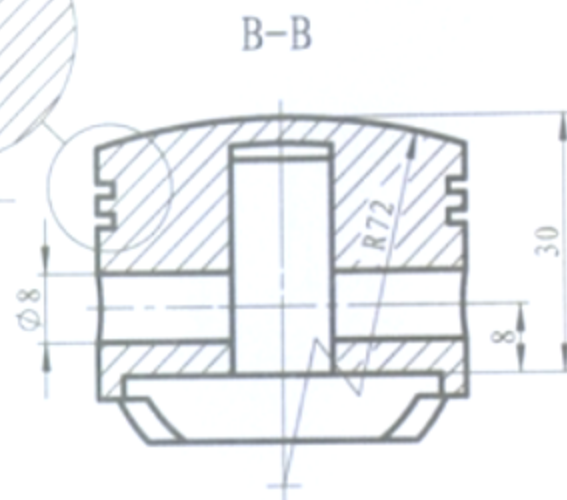
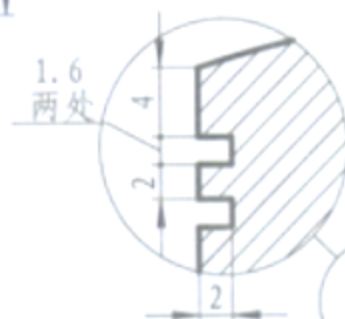
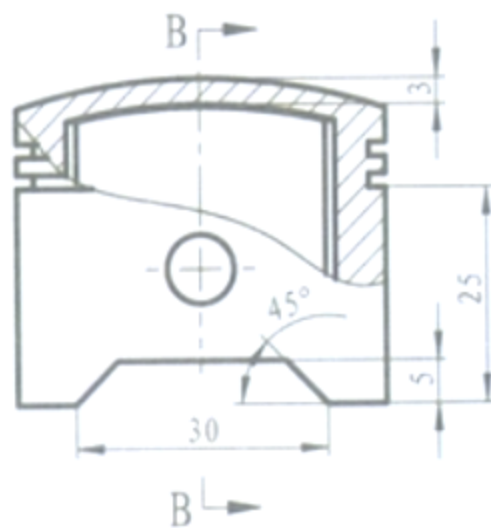
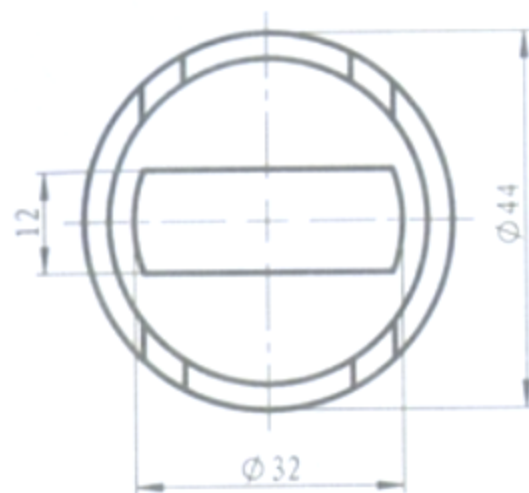
剖面 B-B

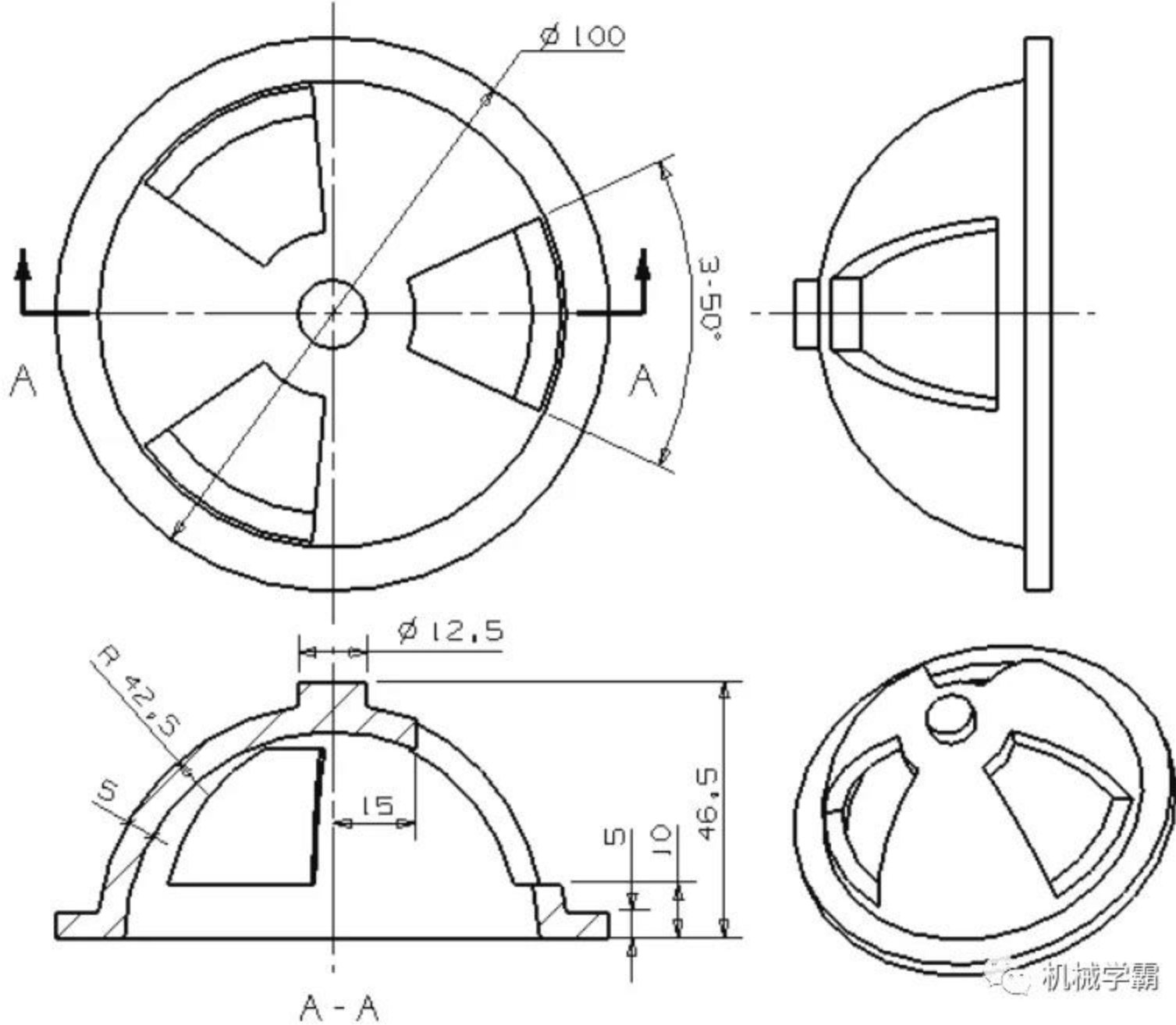


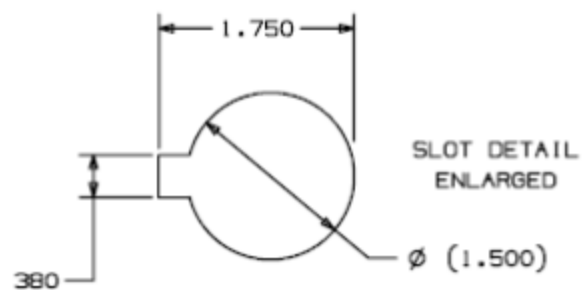
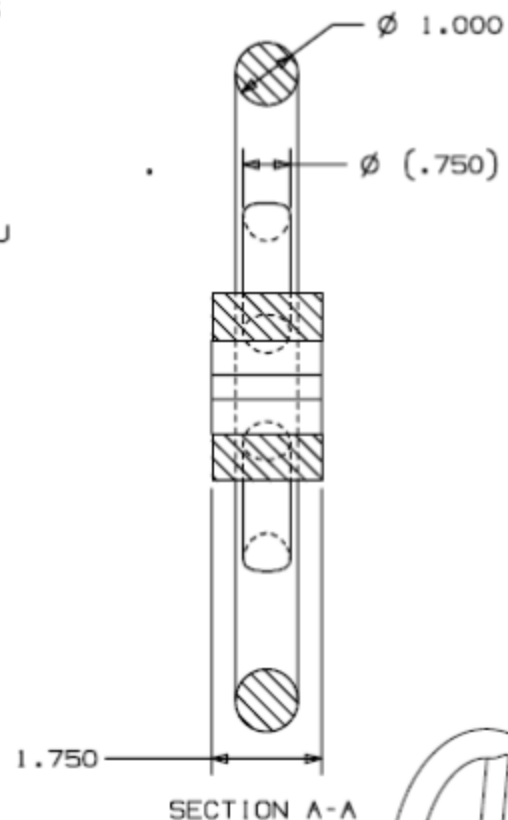
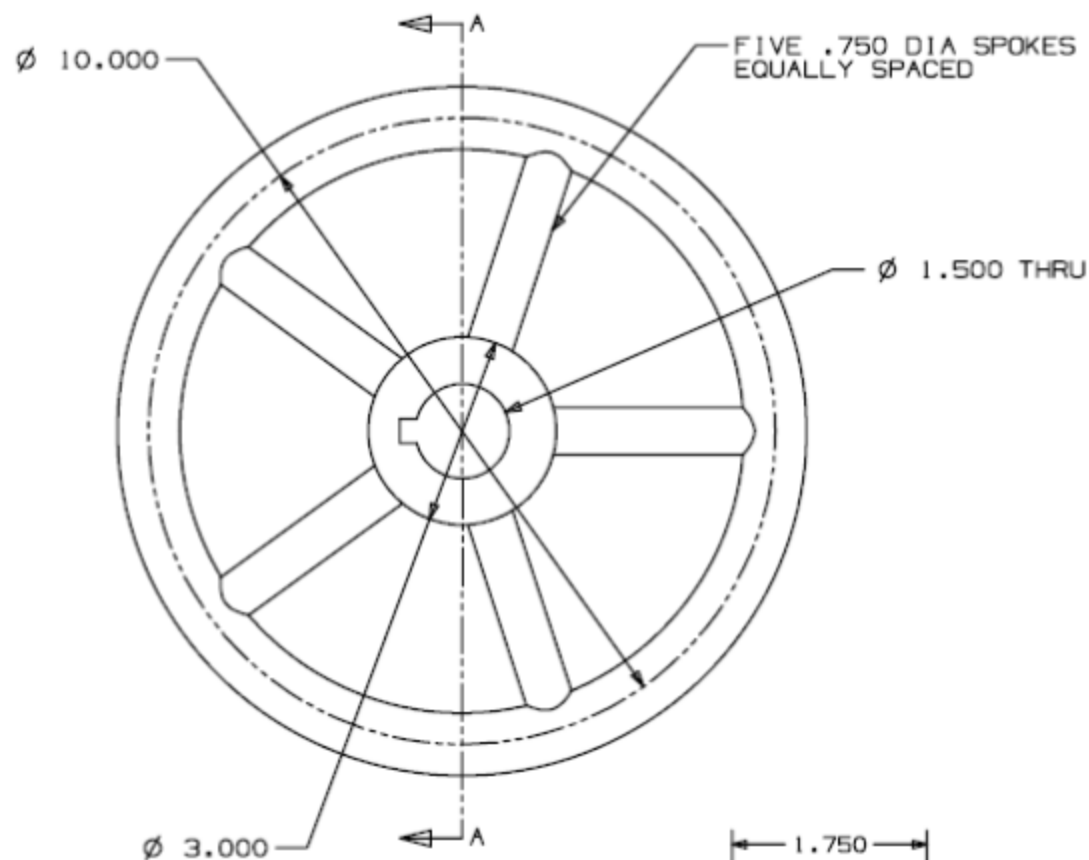
凸台环绕均布36个
侧面拔模斜度为10°

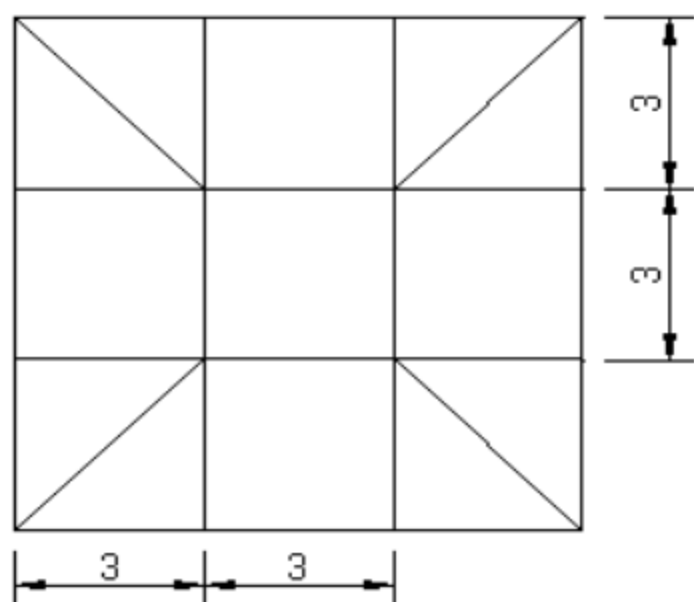
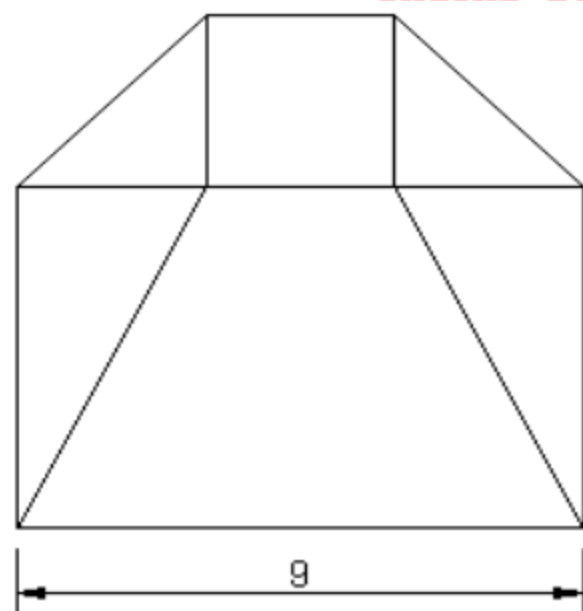
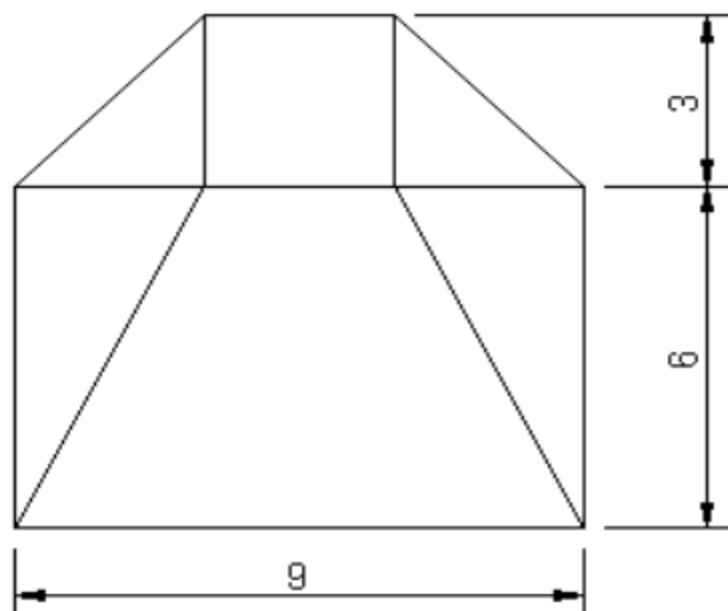


16



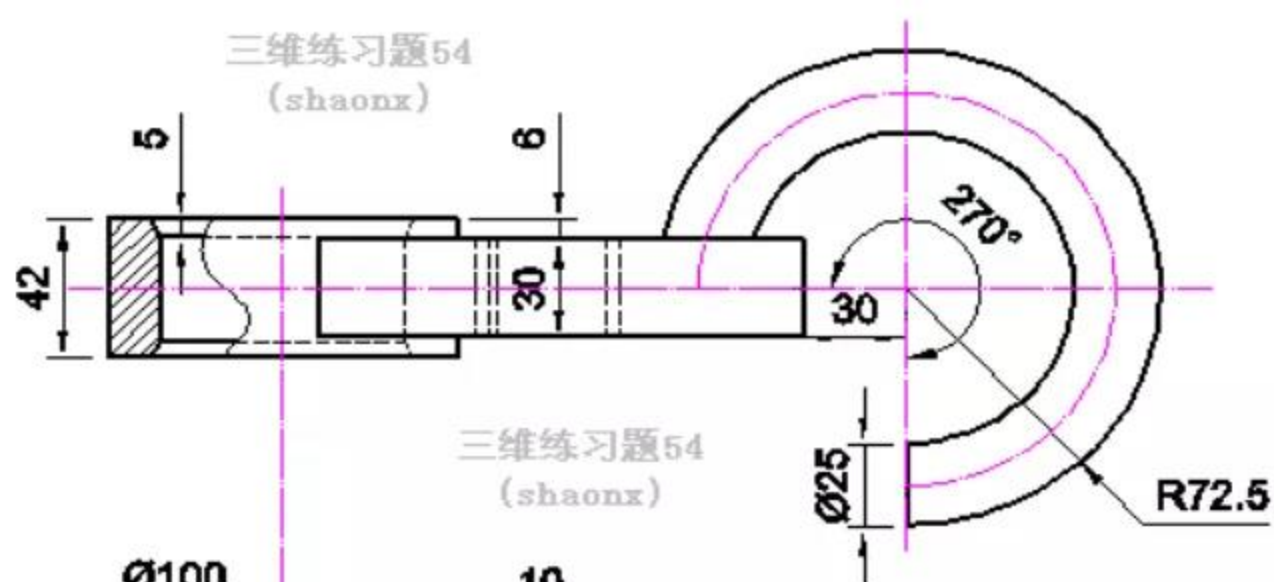






三维练习题54

(shaonx)

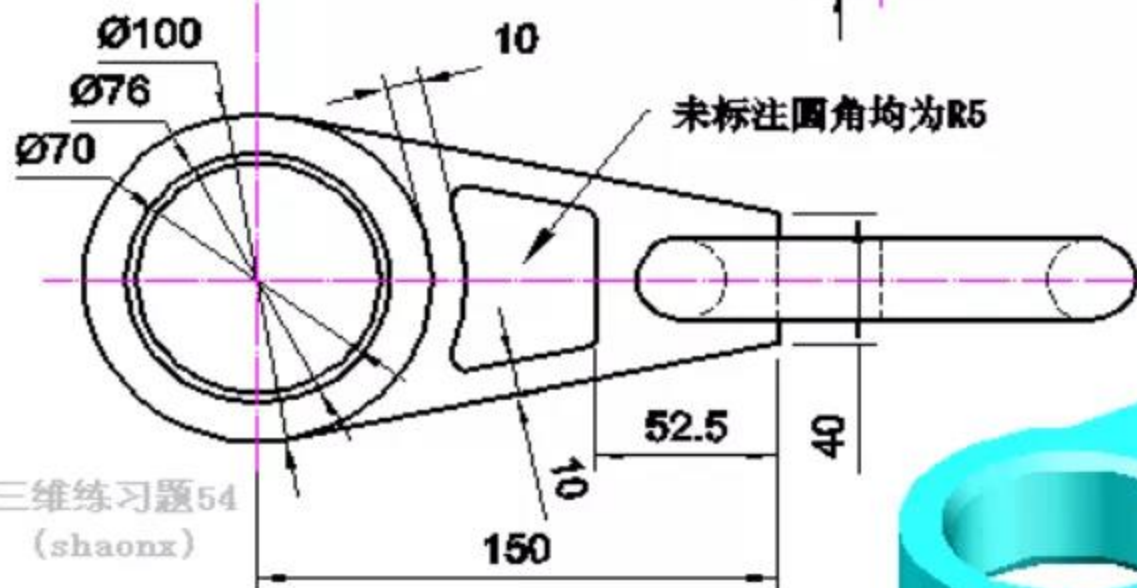


三维练习题54

(shaonx)

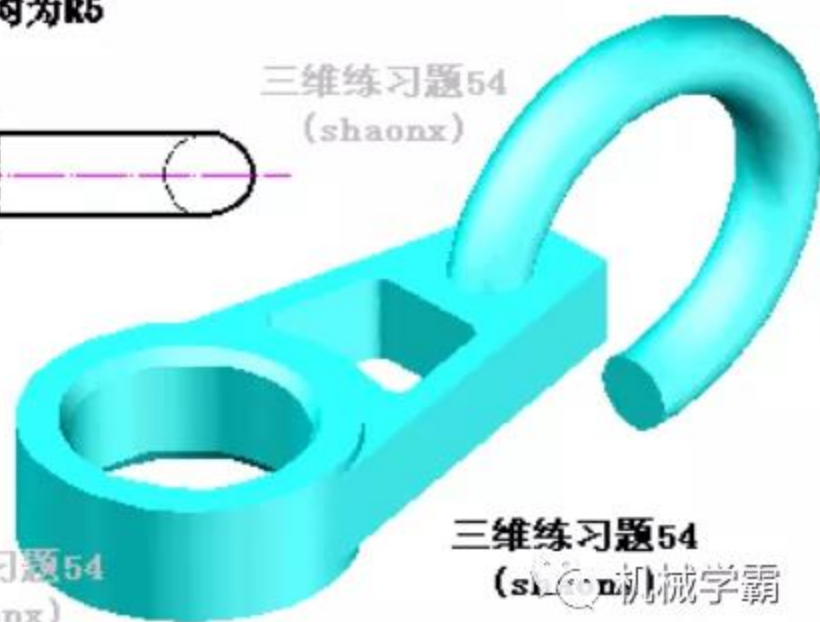
三维练习题54

(shaonx)



三维练习题54

(shaonx)

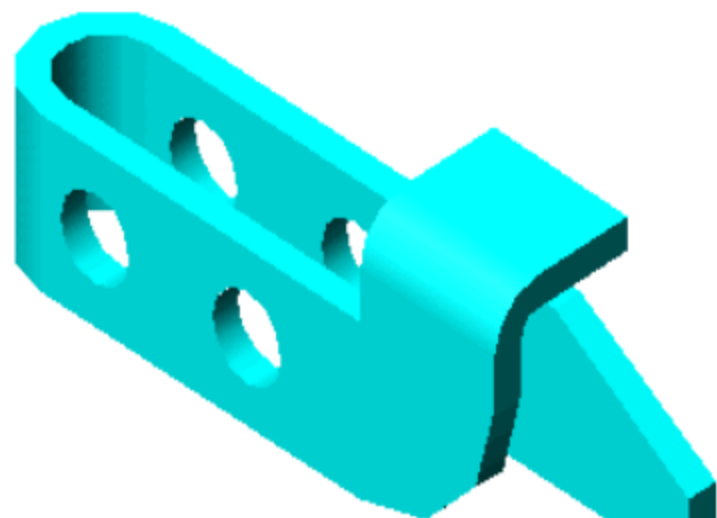
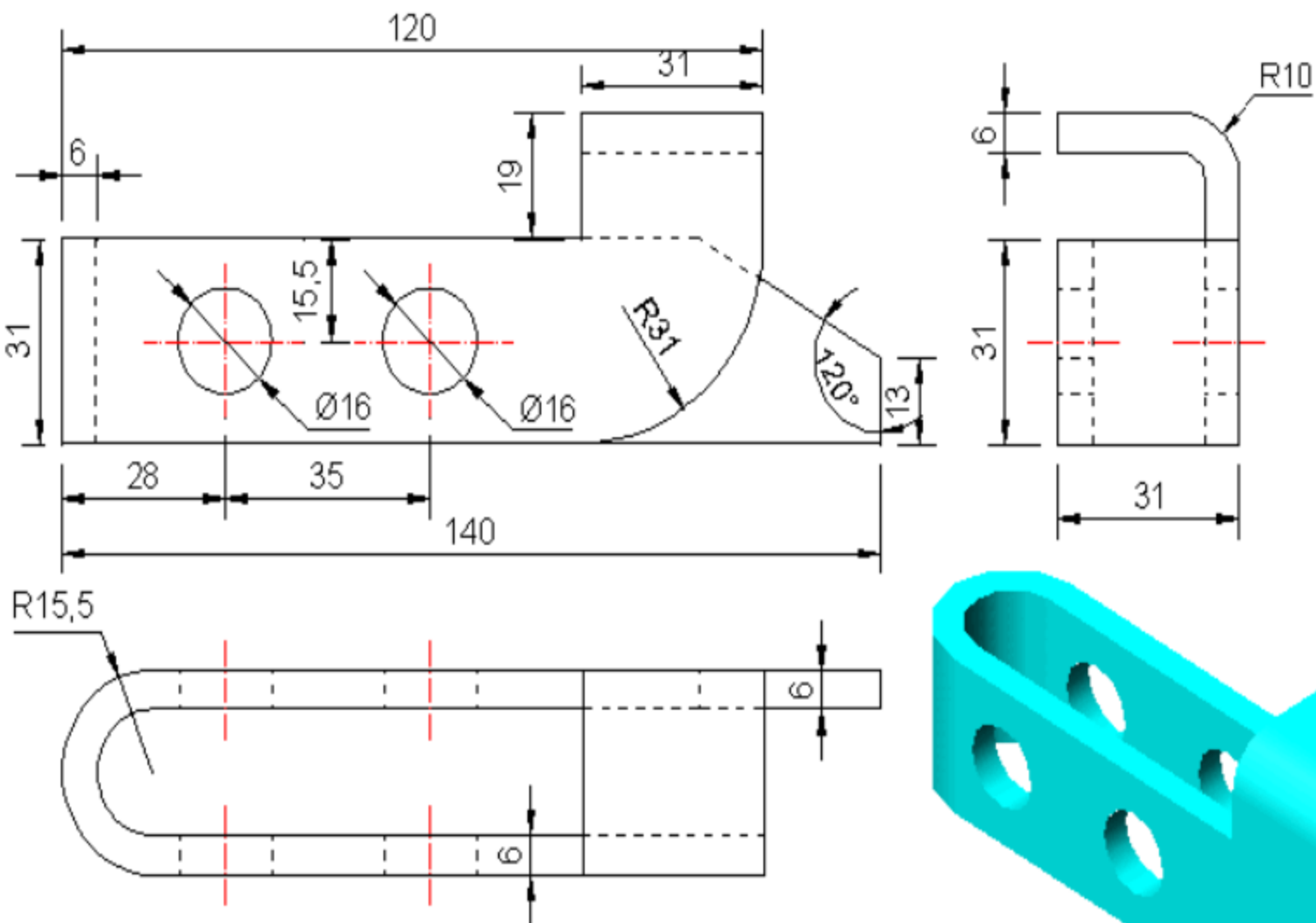


三维练习题54

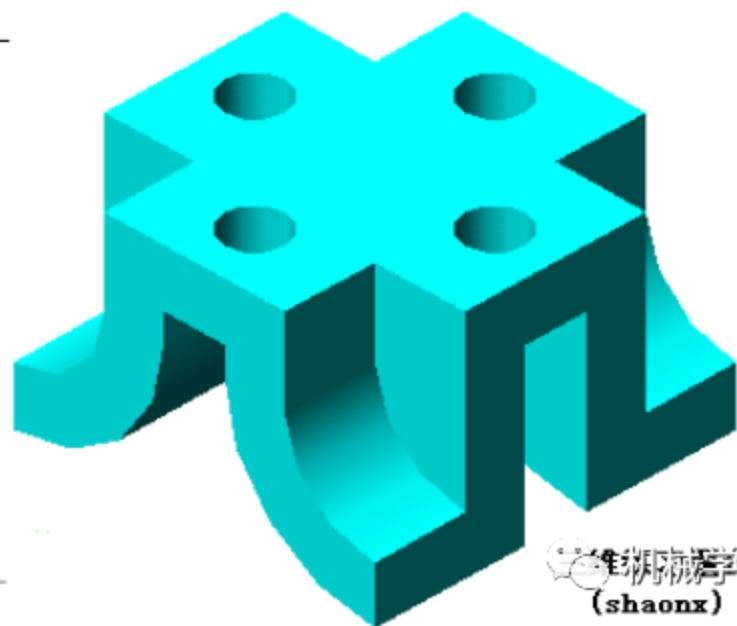
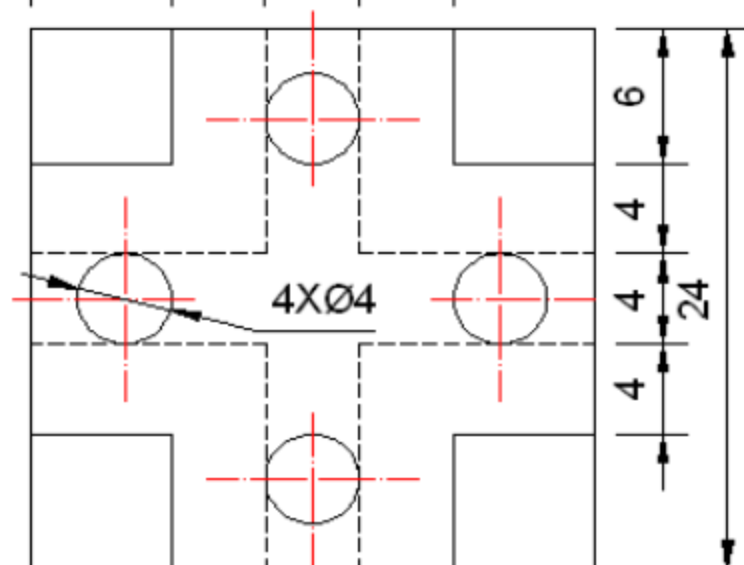
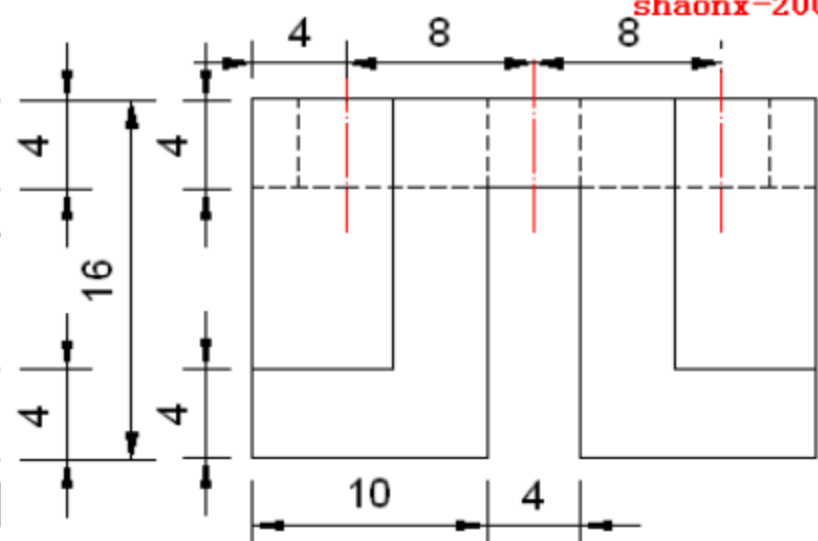
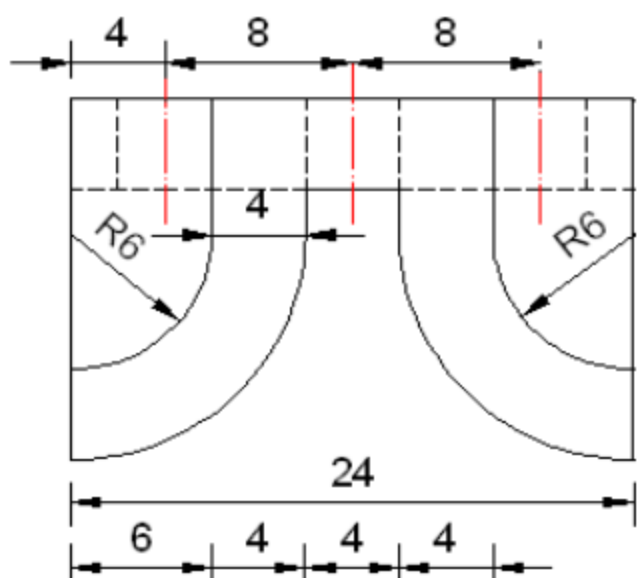
(shaonx) 机械学霸

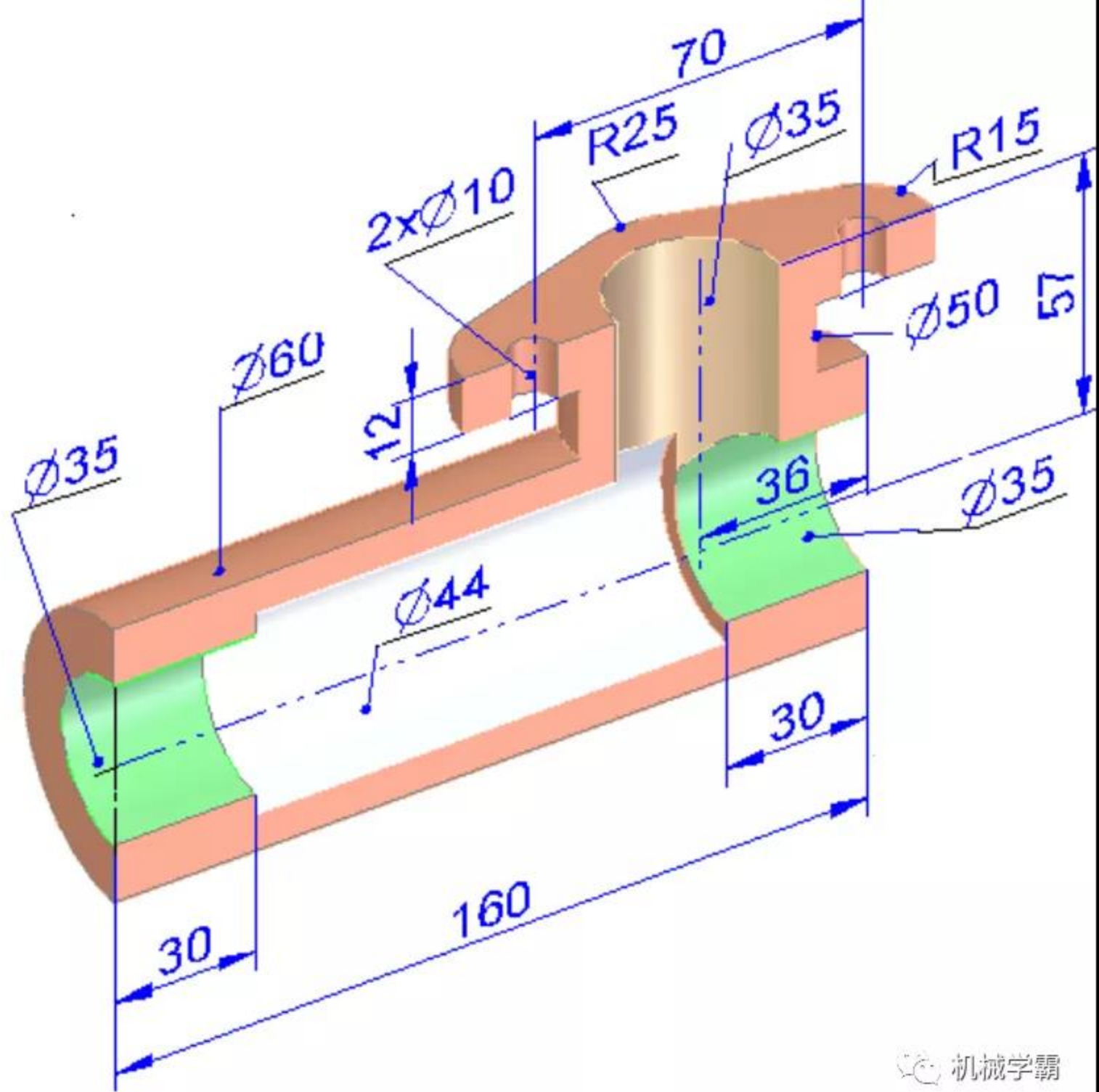
三维练习题54

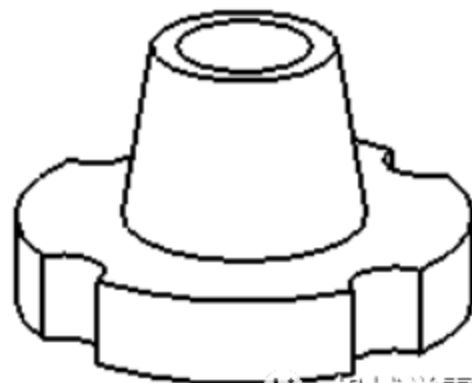
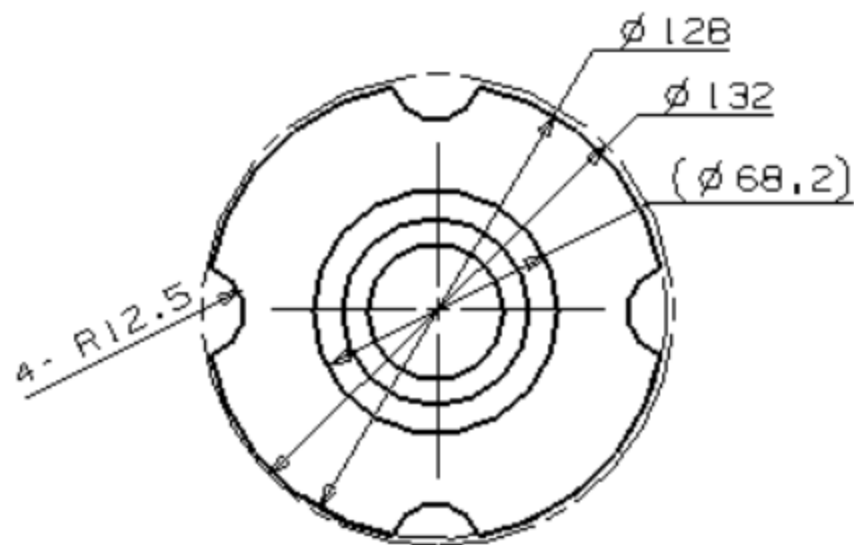
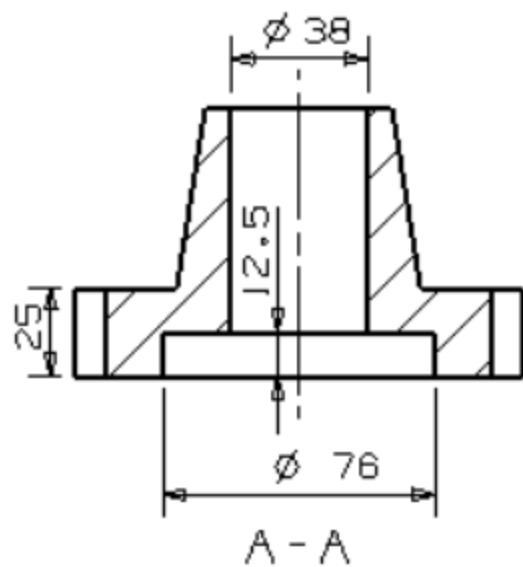
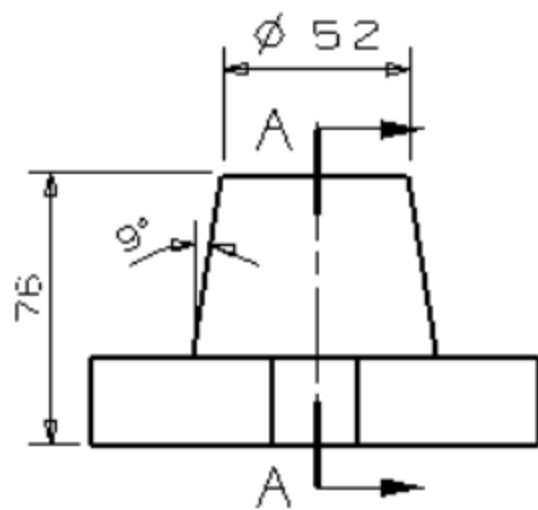
(shaonx)



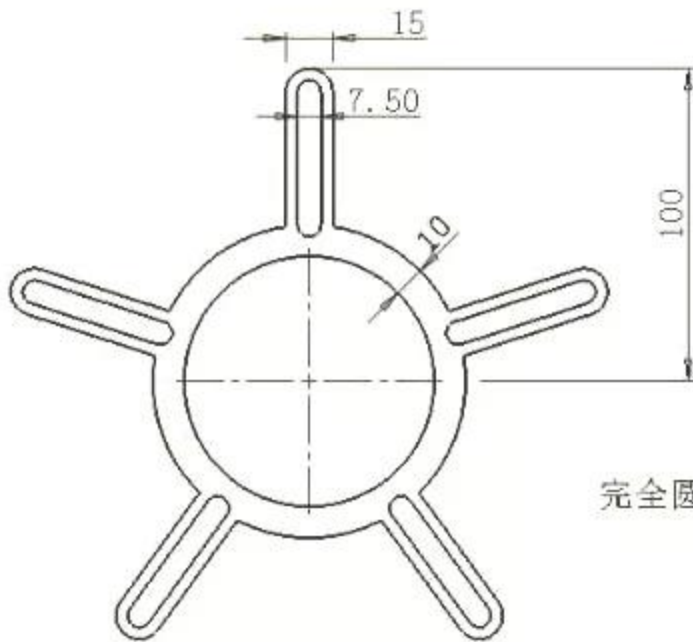
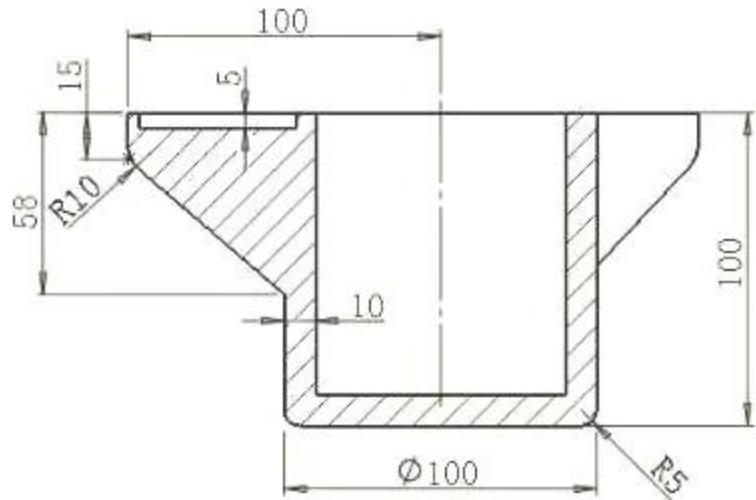
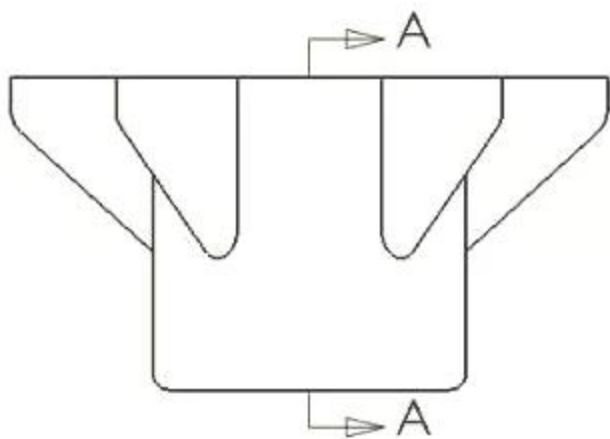
三维练习题13
(shaonx)





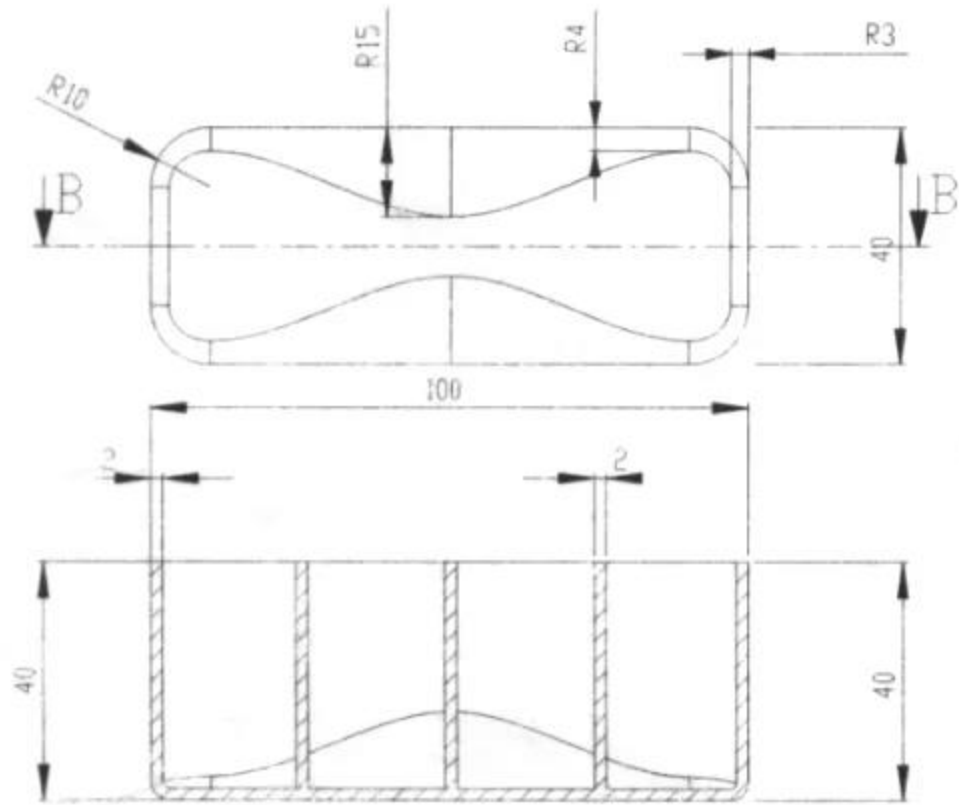




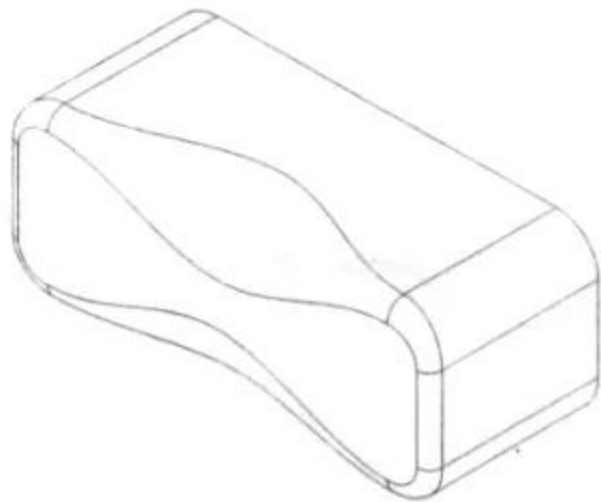


完全圆角

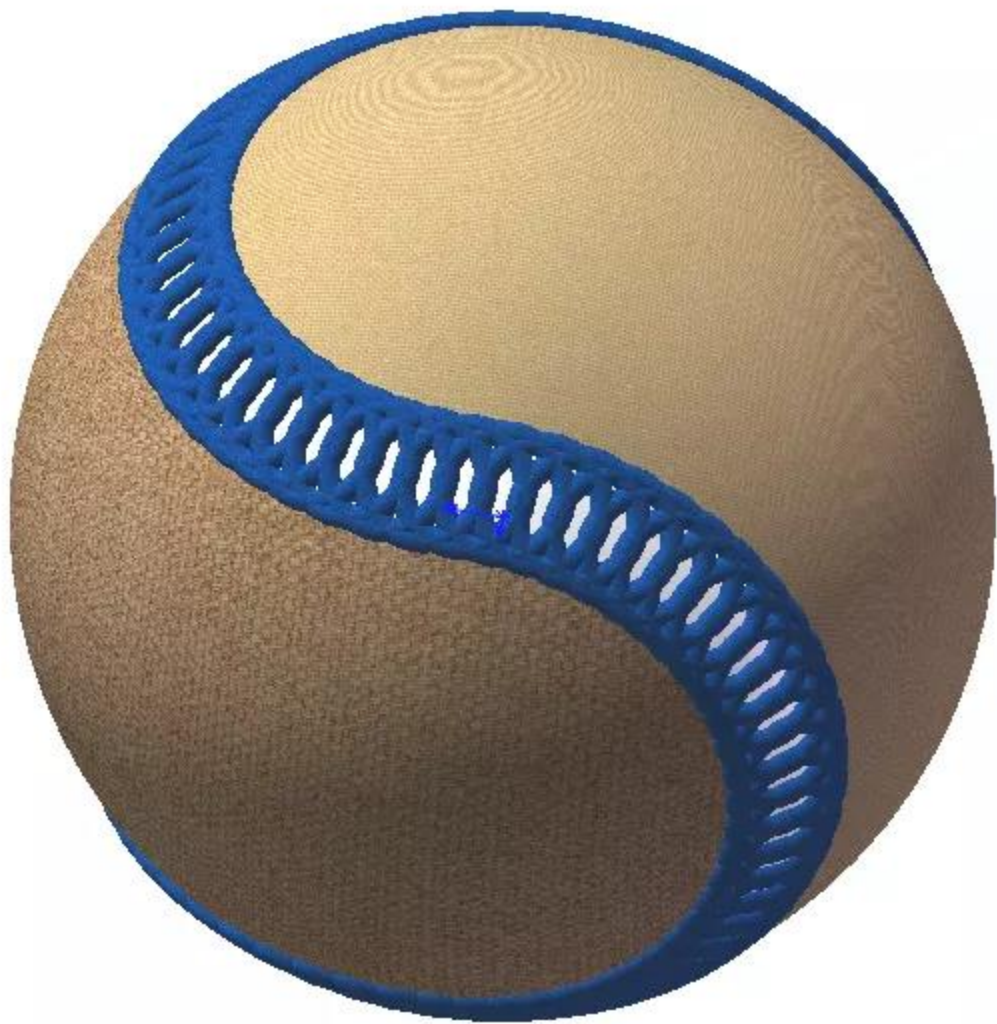


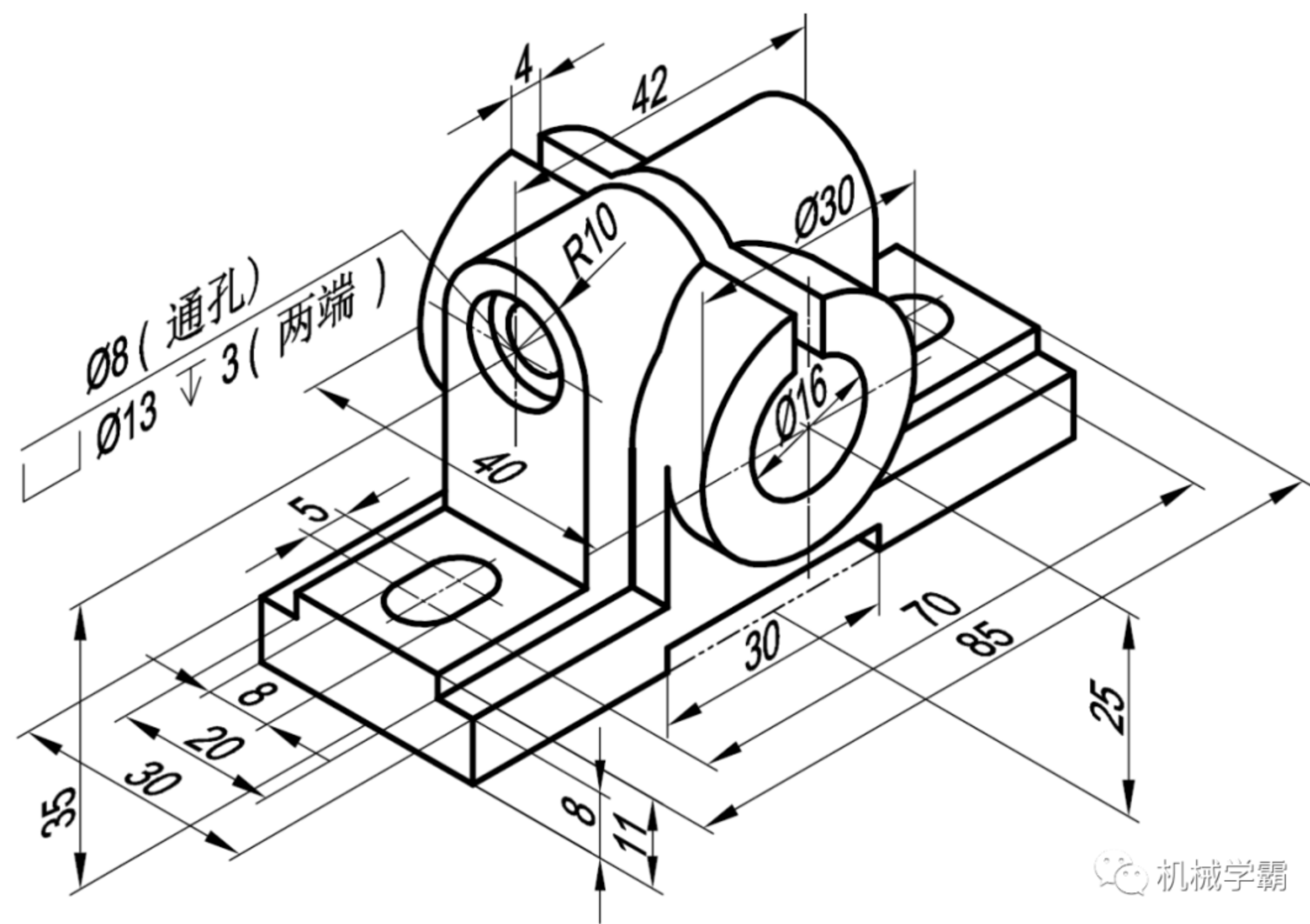


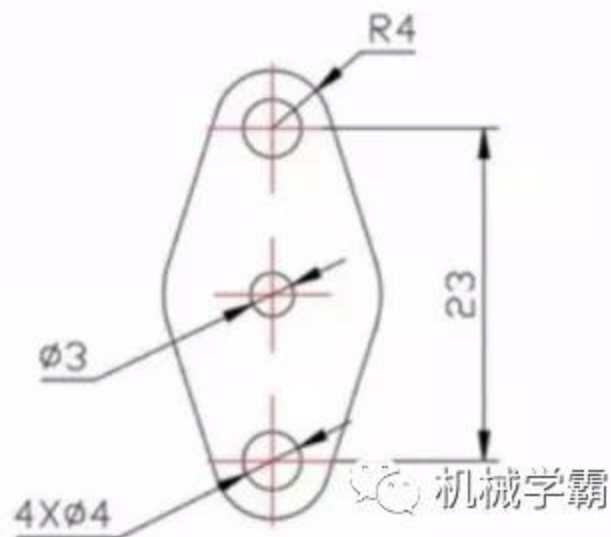
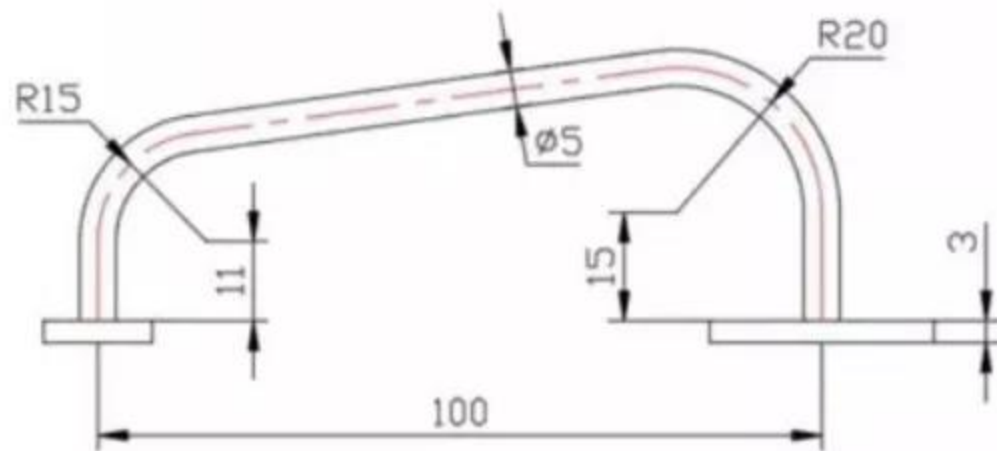
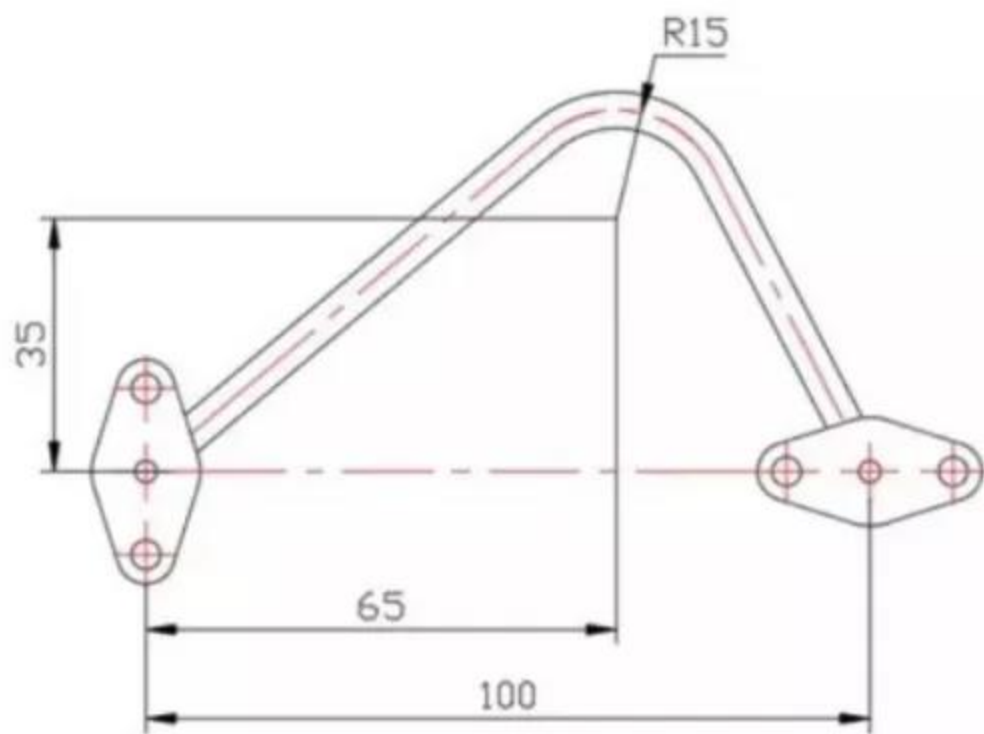
B-B

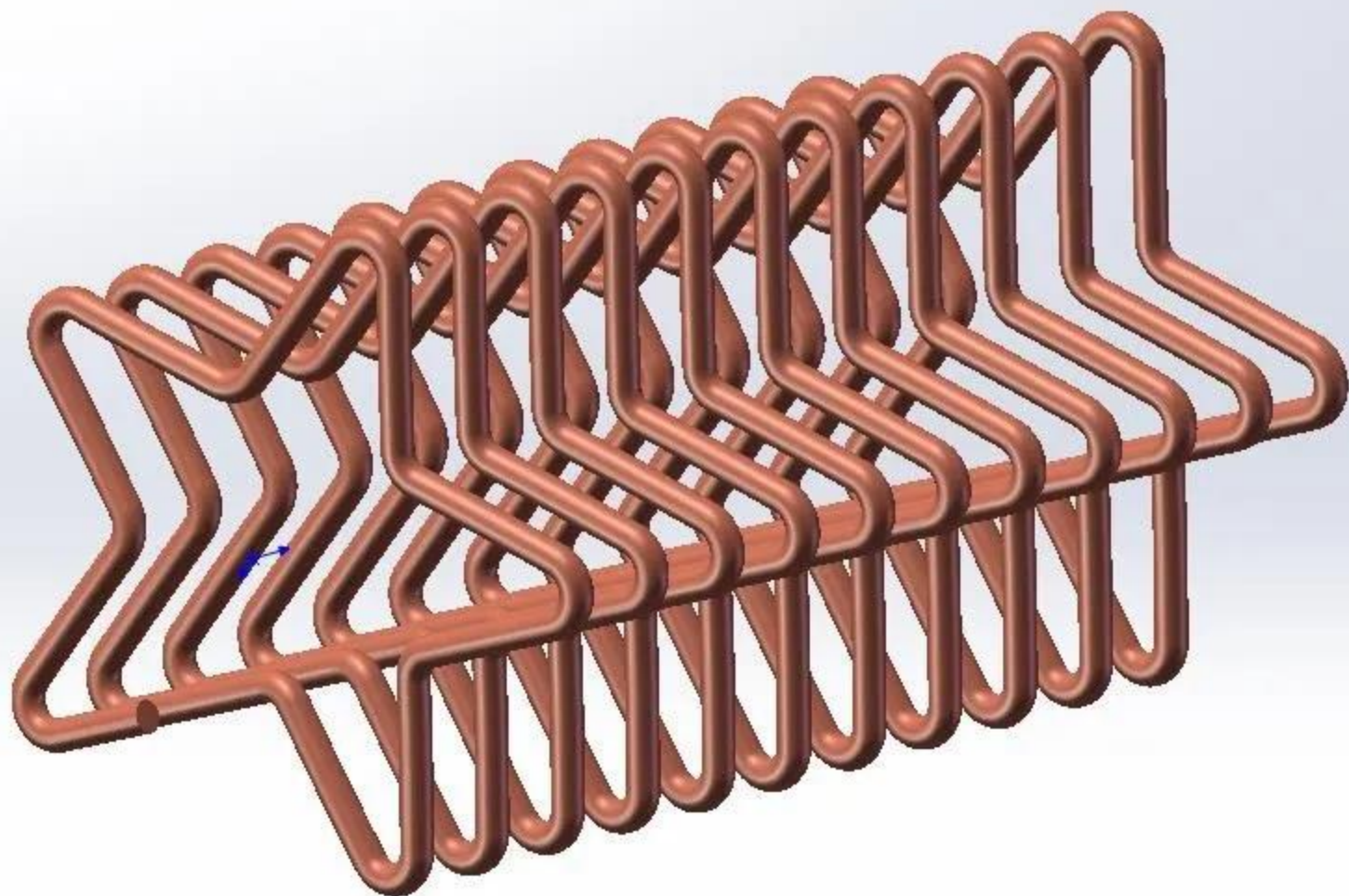


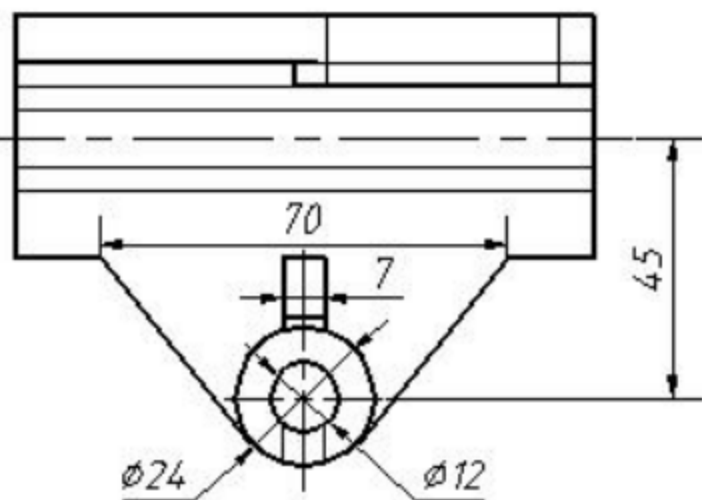
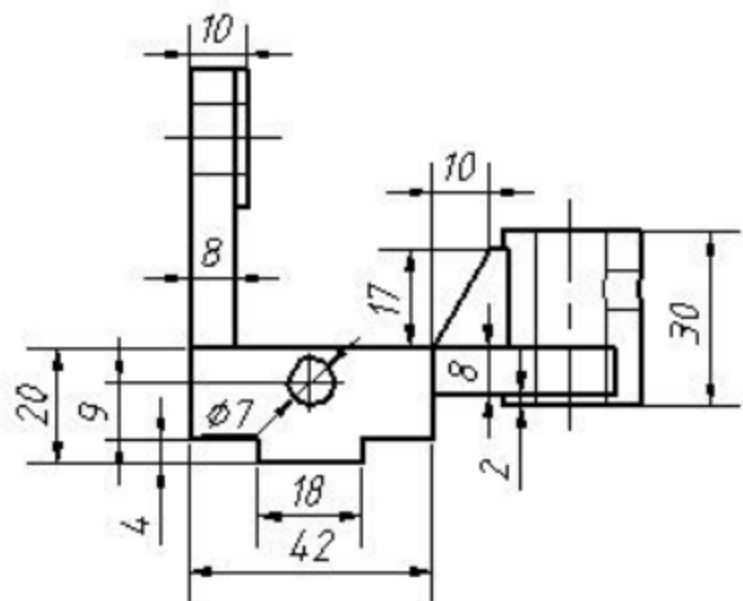
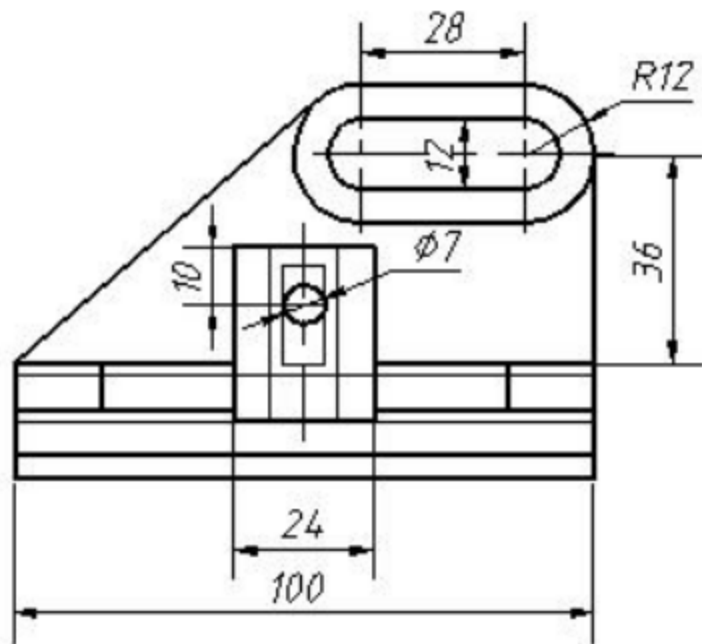




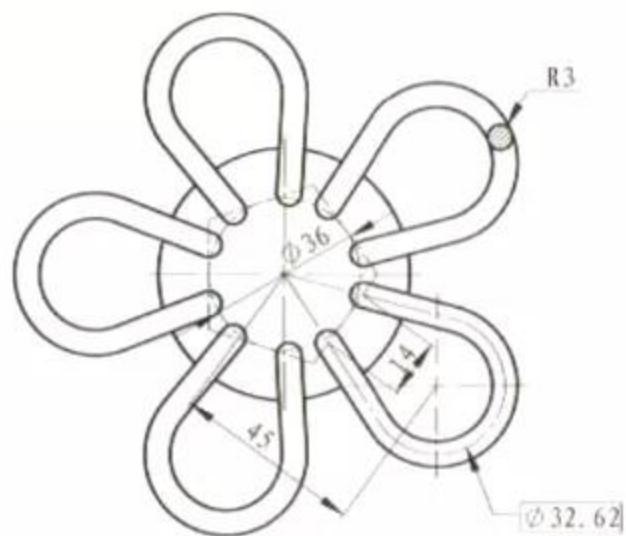
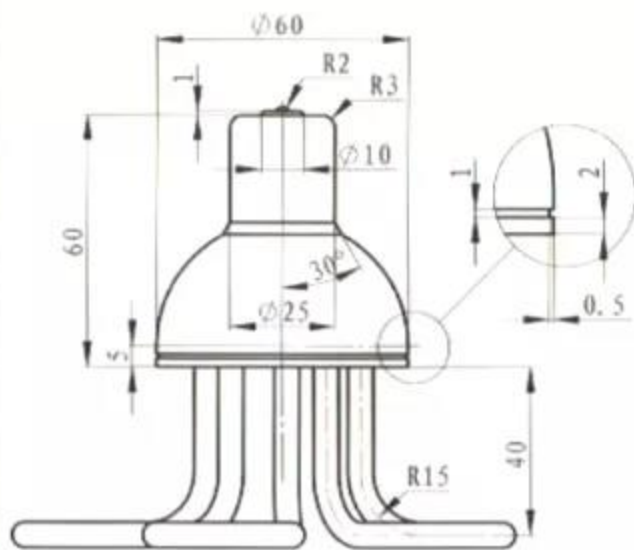






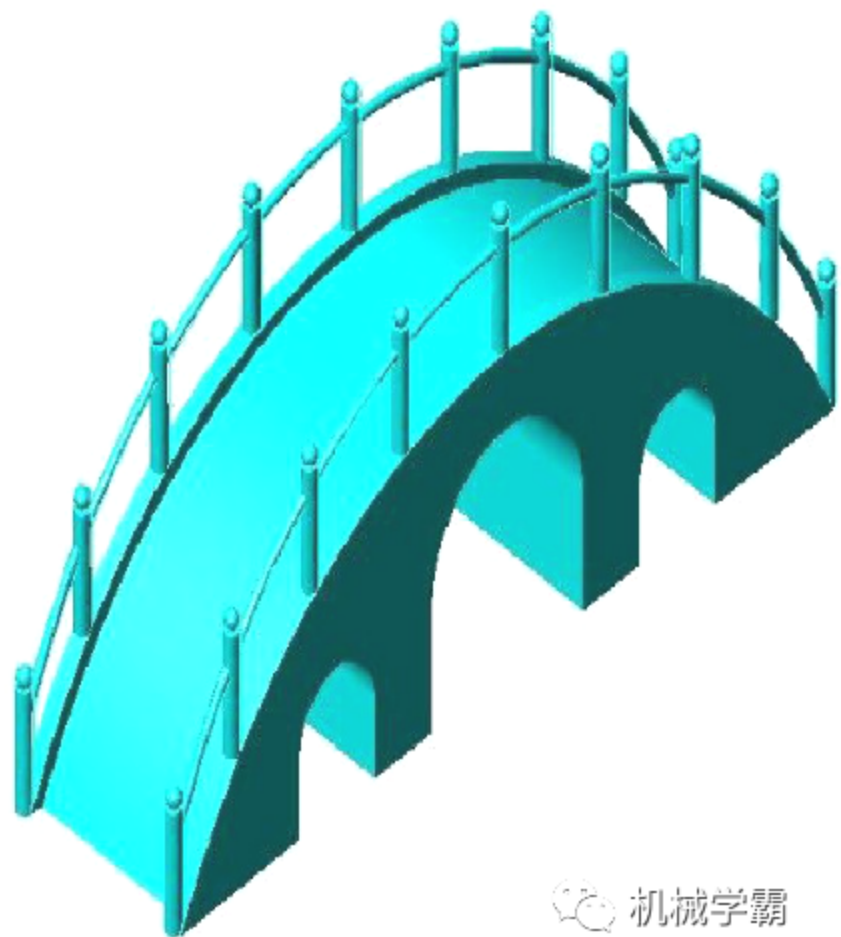
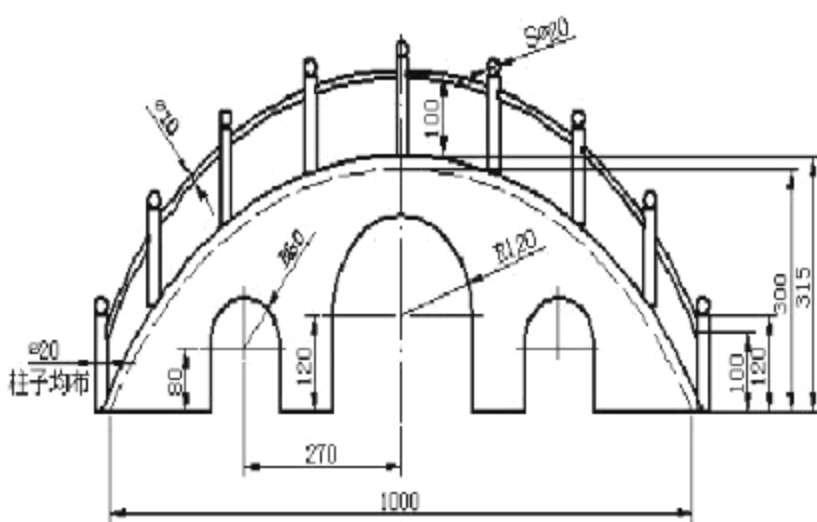


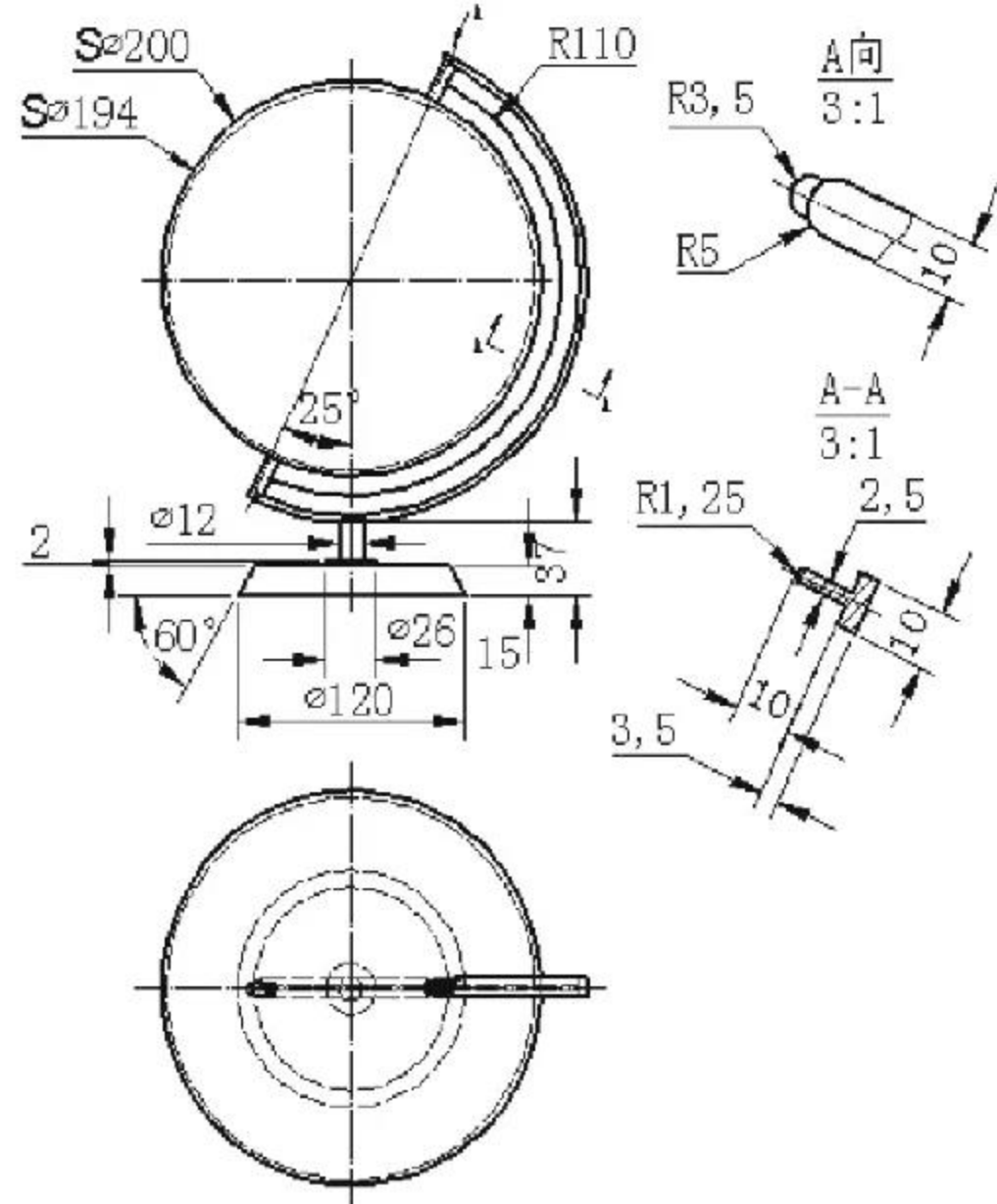
视图 A

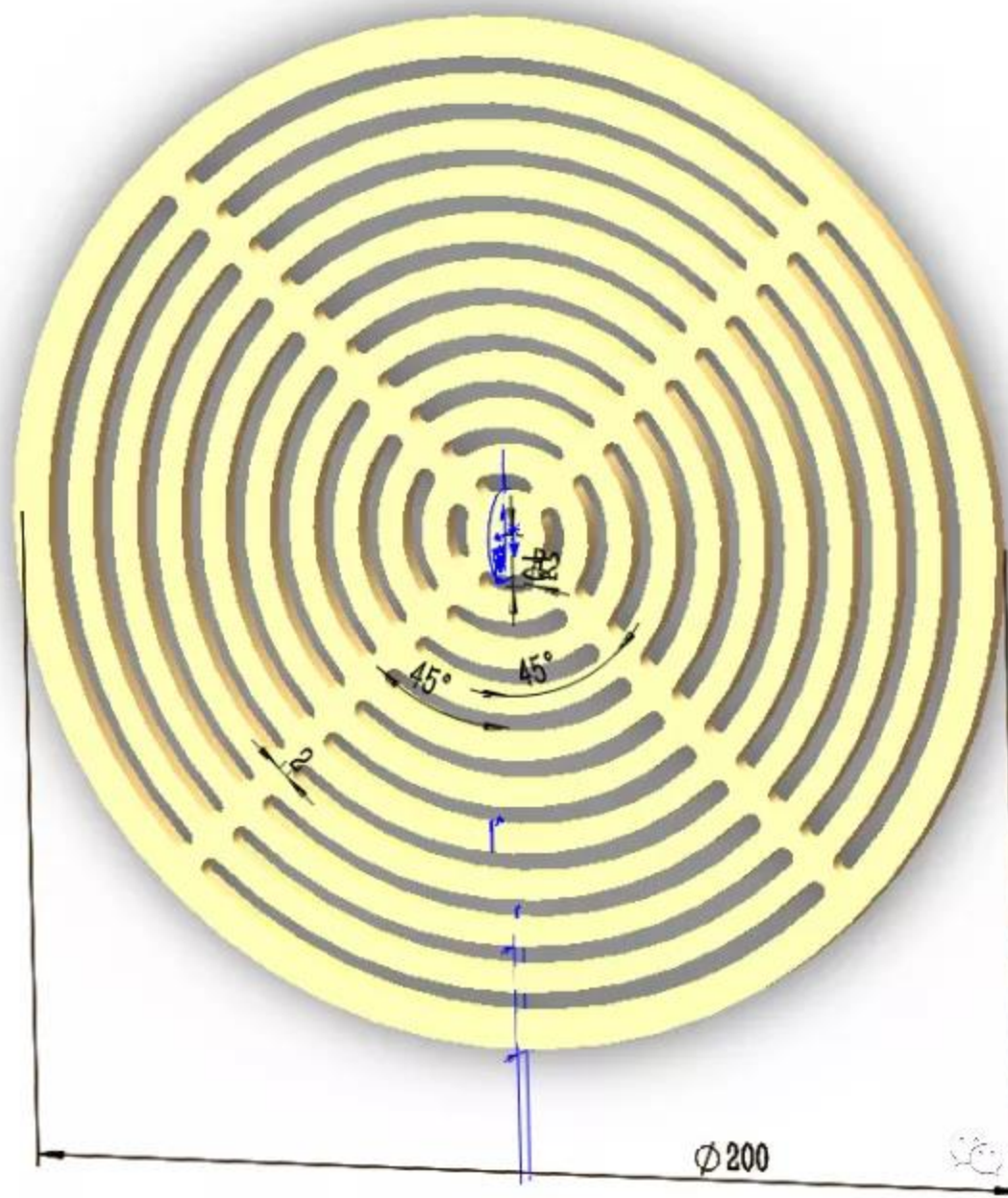


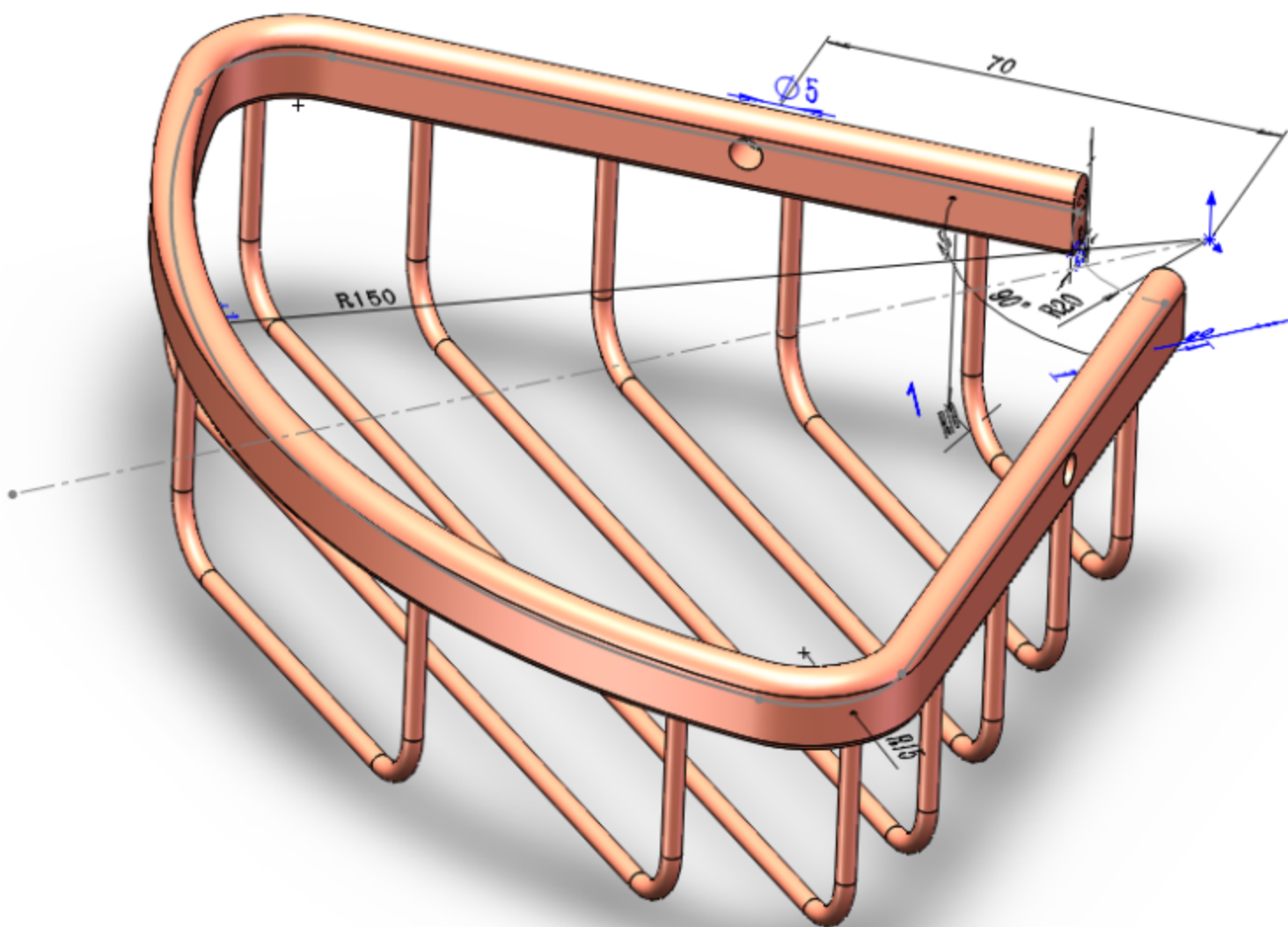
↑ A 灯管扫描的路径线为图中红色所示的3D曲线。

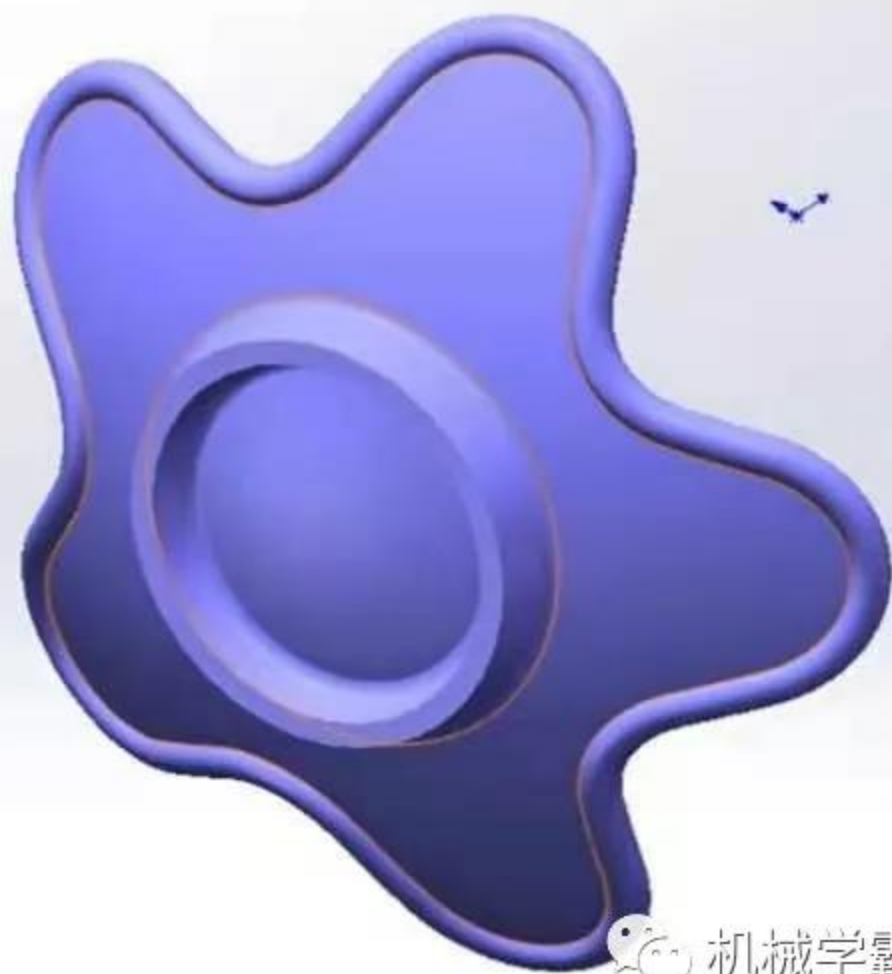


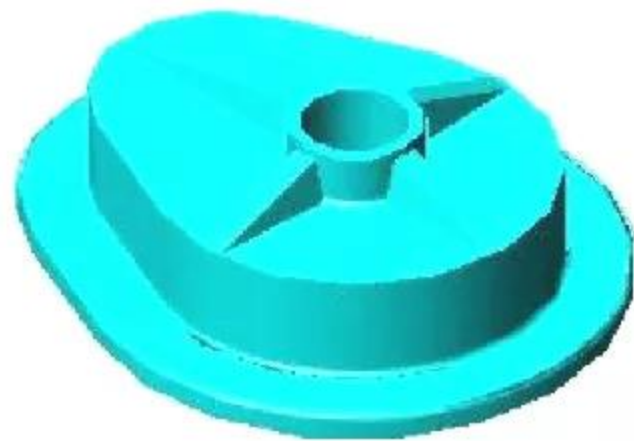
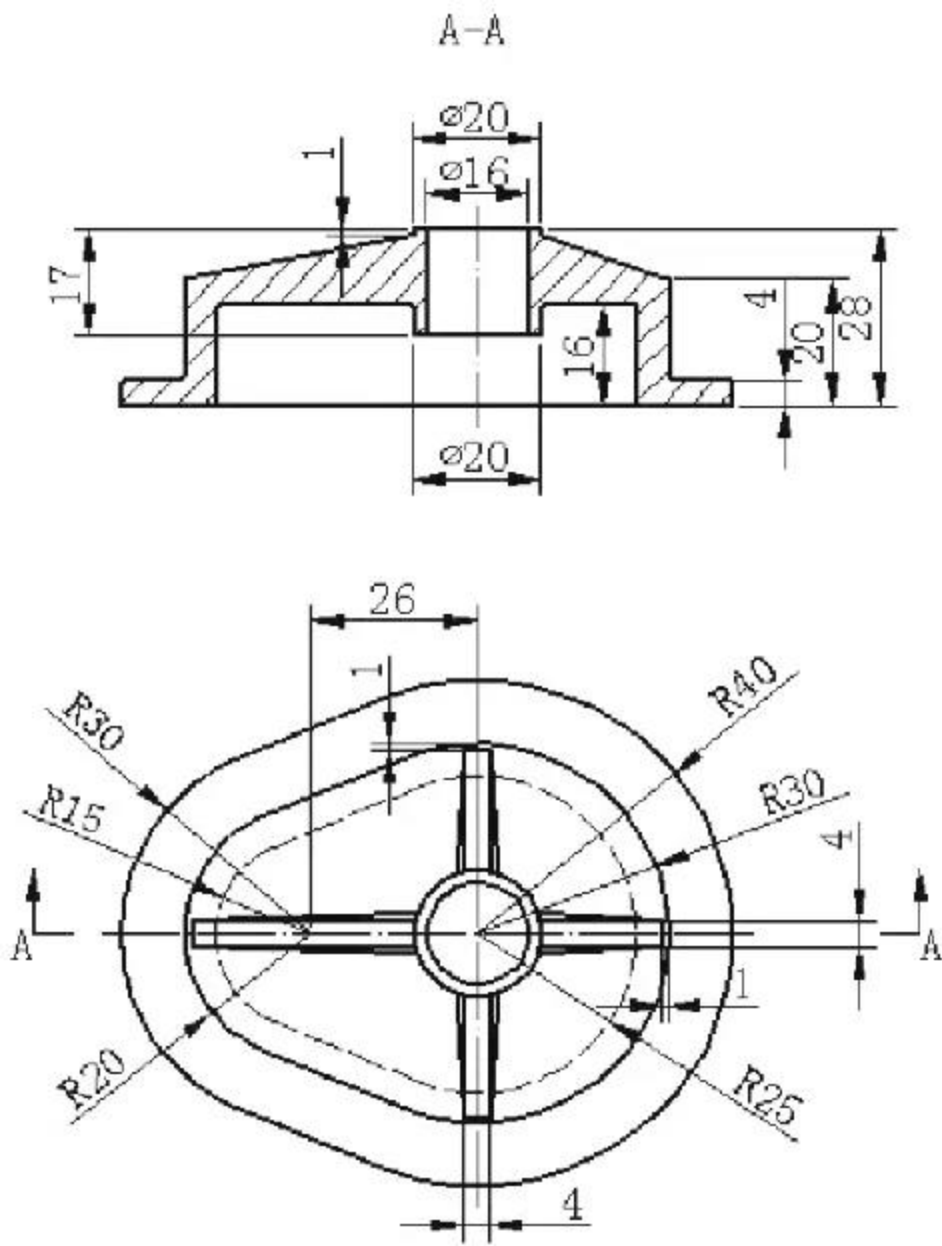








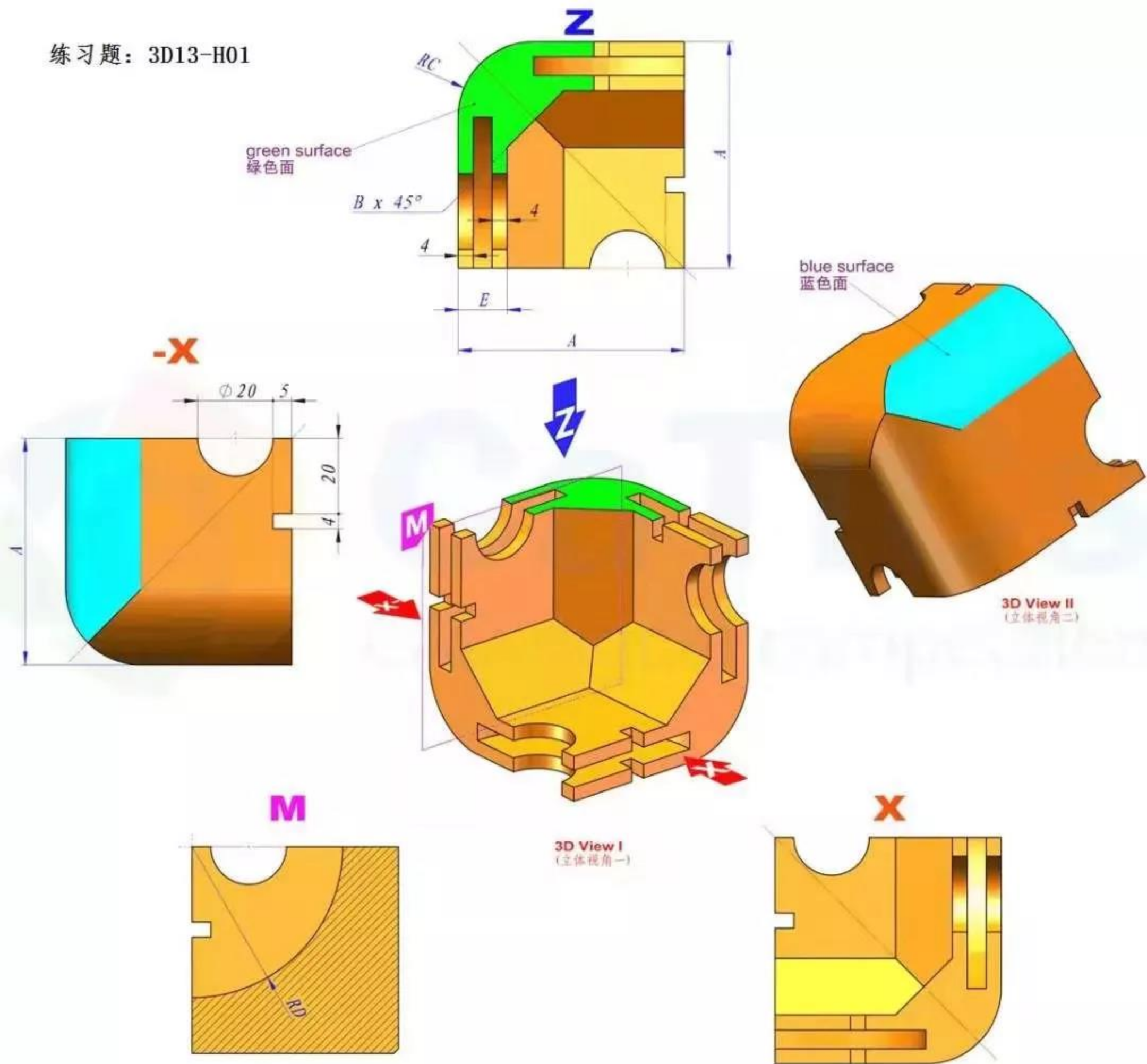




技术要求

- 1) 未注圆角R1
- 2) 未注拔模角度 10°

练习题: 3D13-H01



【題目】

【注意】其中阵列、相切、共线等几何关系。仔细观察其形态结构。（题图为示意图，只用于表达尺寸和几何关系，由于参数变化，其形态会有所变化）

【参数】

A=60, B=15, C=20, D=40, E=13

【问题】

- 1、请问图中绿色面的面积是多少？
- 2、请问图中蓝色面的面积是多少？
- 3、请问模型体积是多少？

【答案】

3. 机械学霸

机械学霸：

【题目】

【几何】阵列、相切、同心等几何关系。（题图为示意图，只用于表达尺寸和几何关系，由于参数变化，其形态会有所变化）（输入答案时请精确到小数点后两位）

【参数】

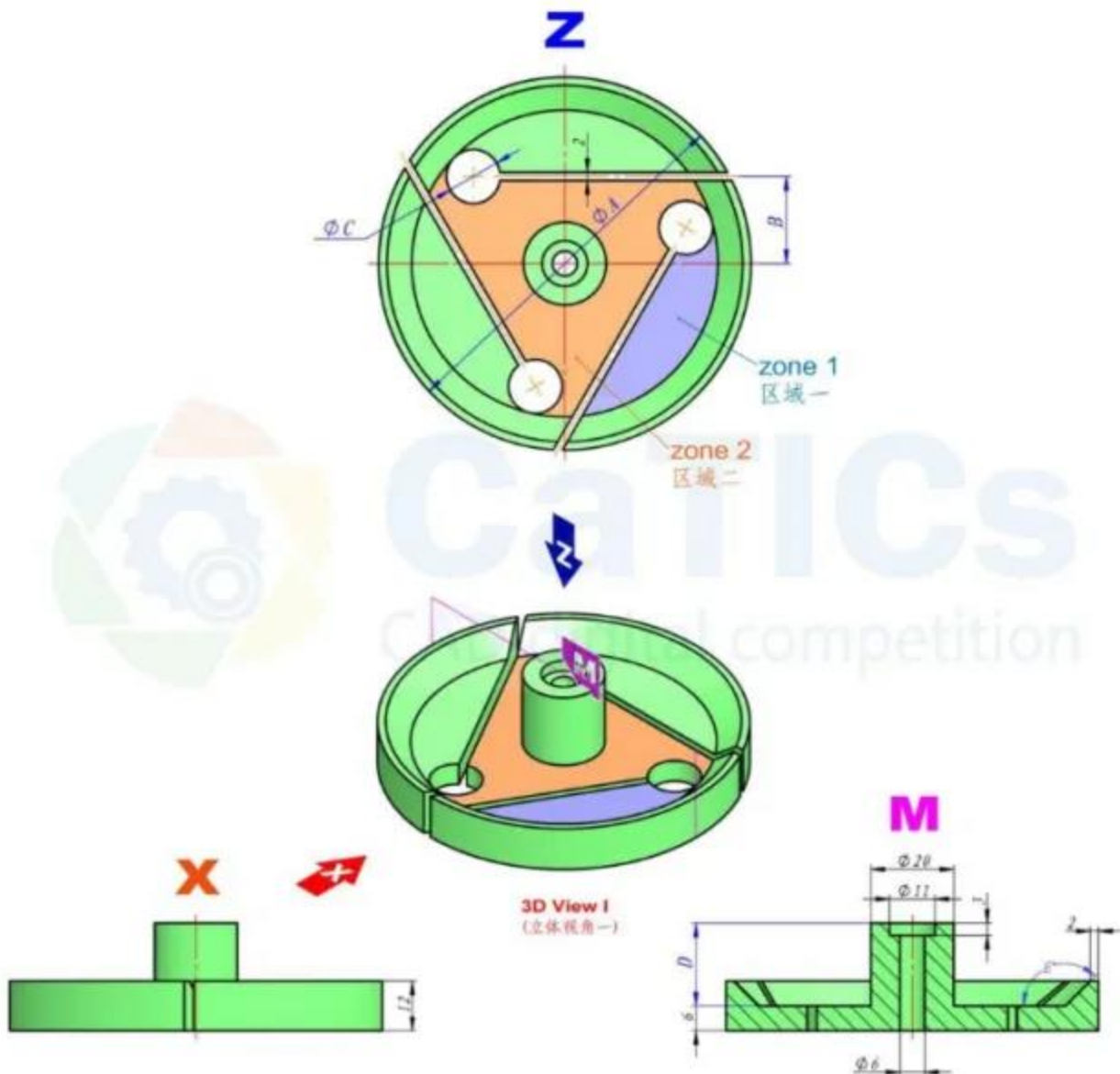
A=90 B=21 C=13 D=20 E=135

【问题】

- 1、请问图中区域一的面积是多少？
- 2、请问图中区域二的面积是多少？
- 3、请问模型体积是多少？

【答案】

- 1、569.26
- 2、1604.12
- 3、46879.8



机械学霸：

【题目】

【几何】相切、对称等，（题图为示意图，只用于表达尺寸和几何关系，由于参数变化，其形态会有所变化）（输入答案时请精确到小数点后两位）

【参数】

A=2 B=60 C=32 D=27 E=48

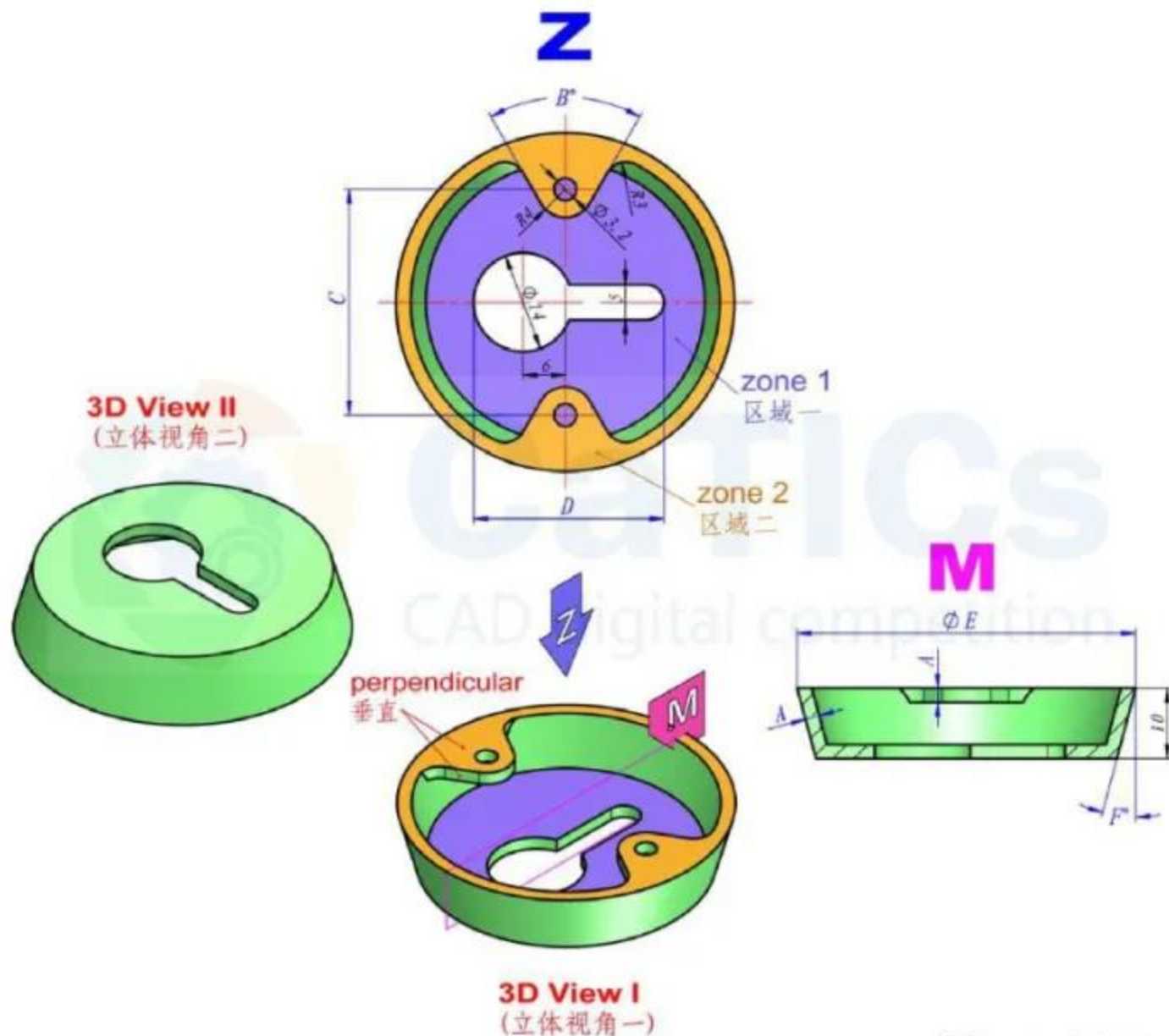
F=15

【问题】

- 1、请问区域一的面积是多少？
- 2、请问区域二的面积是多少？
- 3、请问模型体积是多少？

【答案】

- 1、1012.86
- 2、476.99



机械学霸：

【题目】

【几何】对称、阵列，所有未注壁厚均为 T 。注意图中标注说明。（题图为示意图，只用于表达尺寸和几何关系，由于参数变化，其形态会有所变化）

（输入答案时请精确到小数点后两位）

【参数】

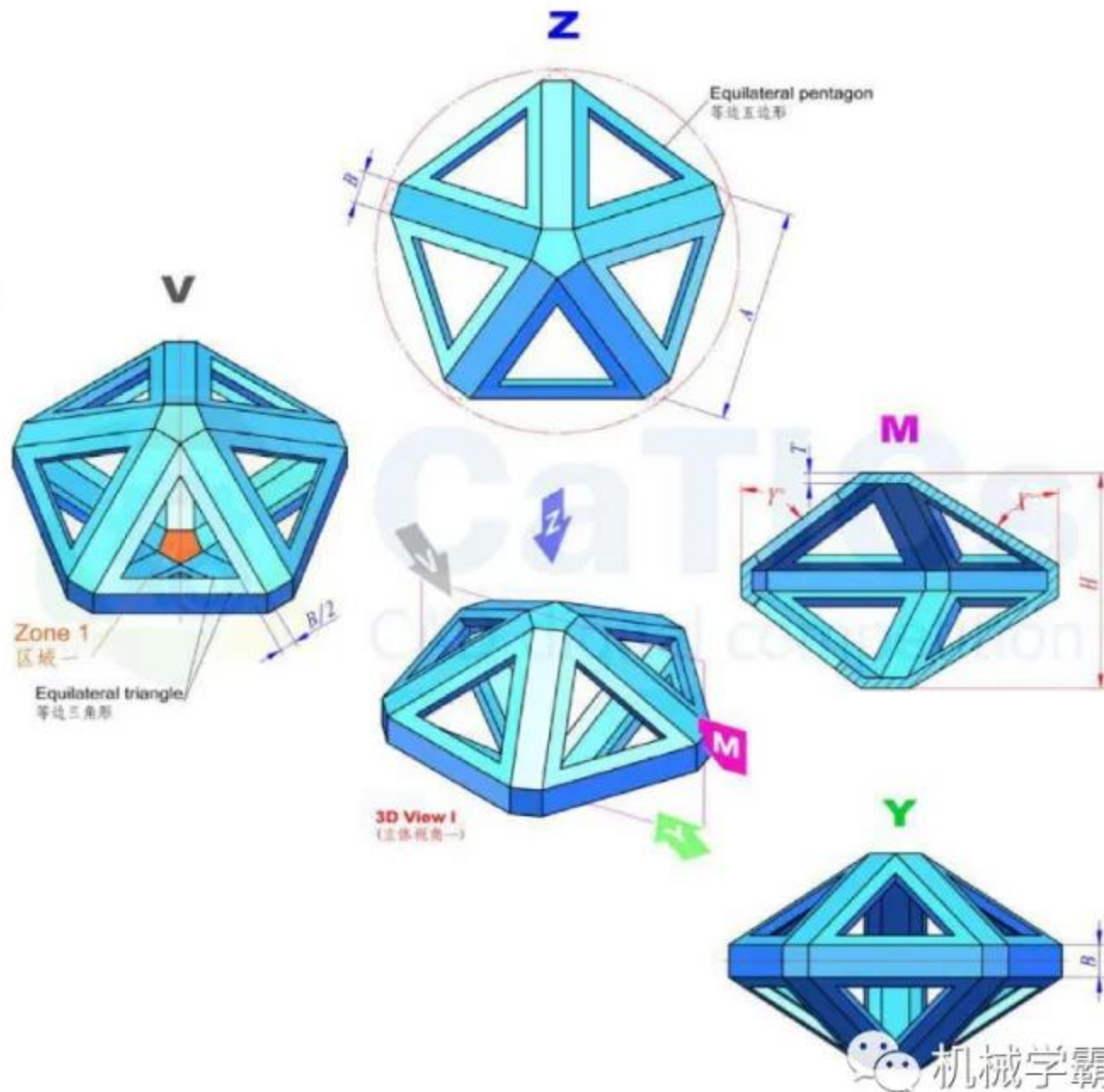
$A=80$ $B=12$ $T=4$

【问题】

- 1、请问 $X=?$
- 2、请问 $Y=?$
- 3、请问 $H=?$
- 4、请问区域一的面积是多少？
- 5、请问模型体积是多少？（答案区间为 50000~500000）

【答案】

- 1、58.28
- 2、52.62
- 3、80.52 4、184.26 5、80287.96



机械学霸： 拉伸、扫描切、孔

【题目】

请参照图构建三维模型，注意其中的同心、对称、阵列等关系。

【参数】

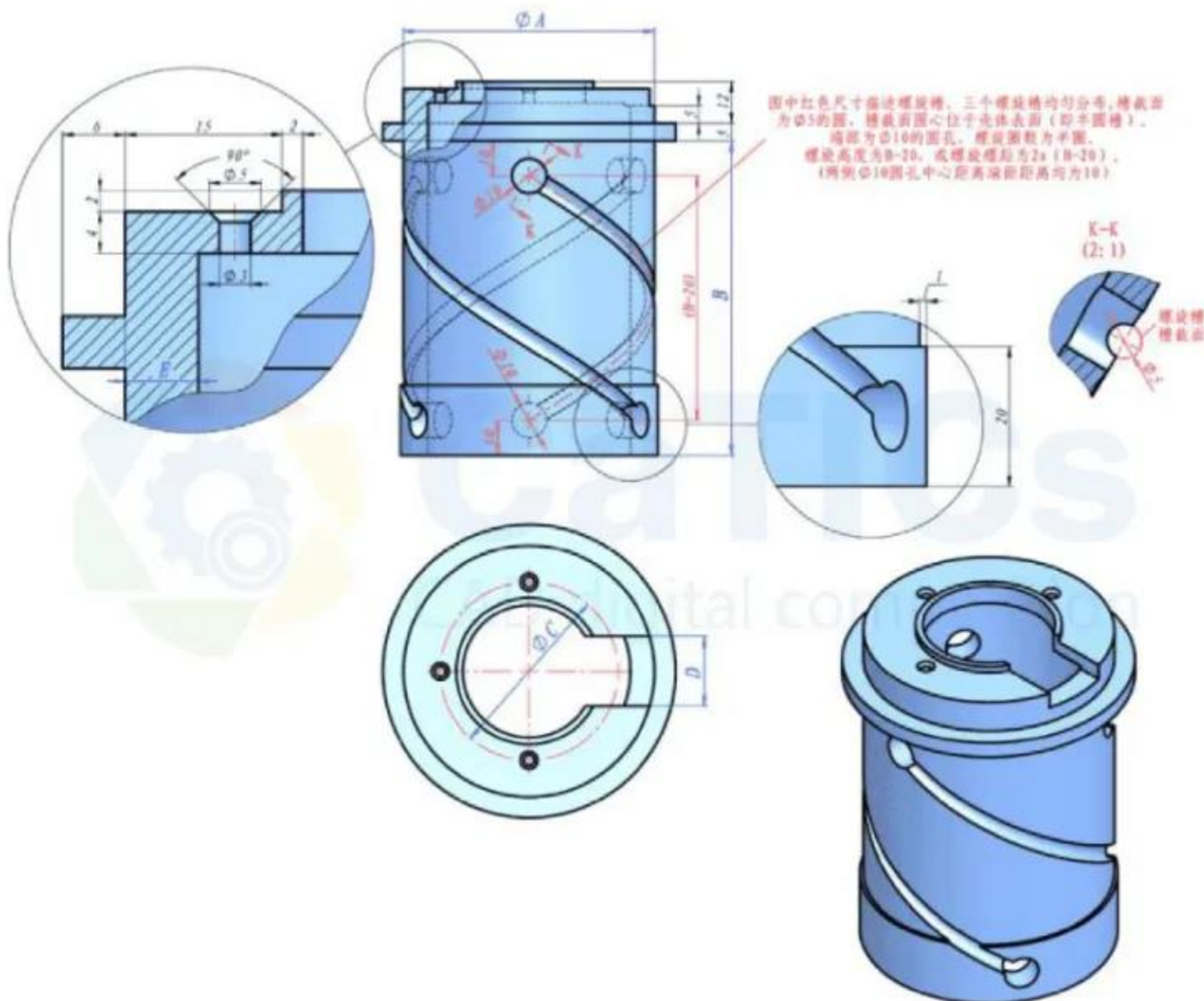
A=72, B=90, C=51, D=20,
E=7

【问题】

模型的体积是多少？

【答案】

1、159549



机械学霸：旋转、拉伸切、阵列

【题目】

参照图构建零件模型，请注意其中的 z 对称、阵列、同心、相切等几何关系。

【参数】

$A=49$, $B=27$, $C=32$, $D=83$, $E=40$,
 $F=119$, $G=66$, $T=3.3$

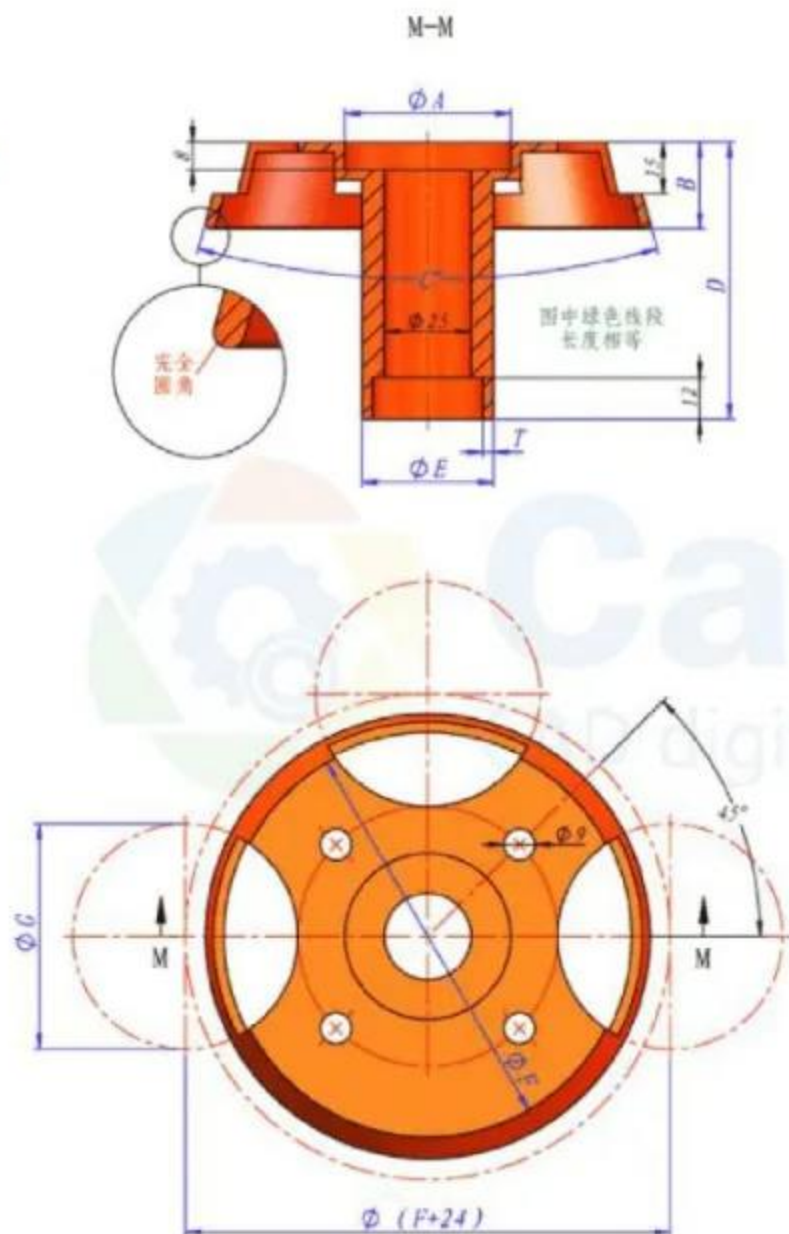
【问题】

1、模型体积是多少？

【题图】

【答案】

1、105563.05



机械学霸：

【题目】

参照图构建三维模型，请注意其中未注明的模型厚度均为 T 。注意观察模型中的对称、同心等几何关系。

【参数】

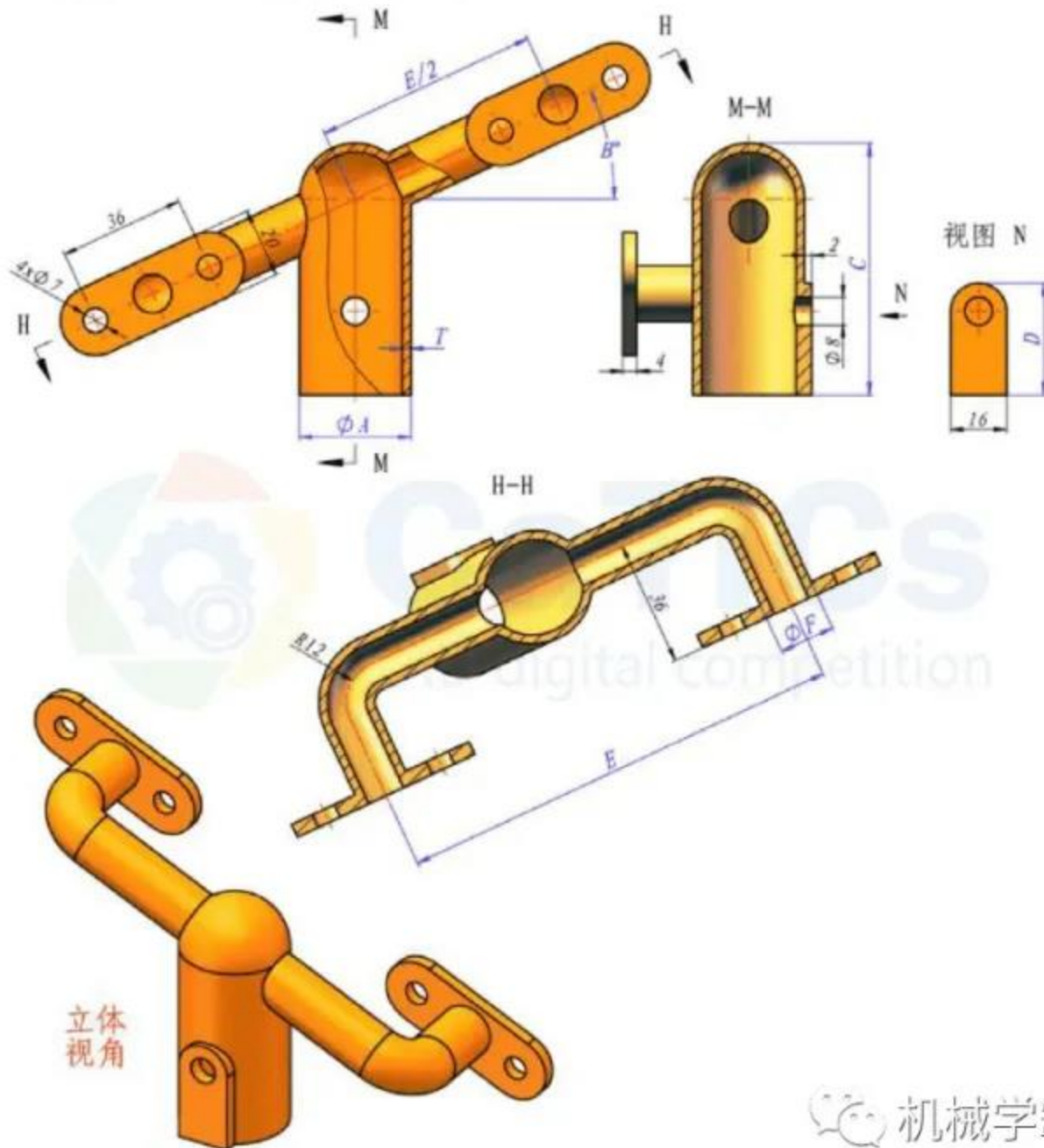
$A=36$, $B=30$, $C=81$, $D=38$, $E=136$, $F=18$, $T=3$

【问题】

1、模型体积为多少？

【答案】

1、53699.71



机械学霸：拉伸、拉伸切

【题目】

参照图构建零件模型，注意其中的同心、对称、阵列等关系。

【参数】

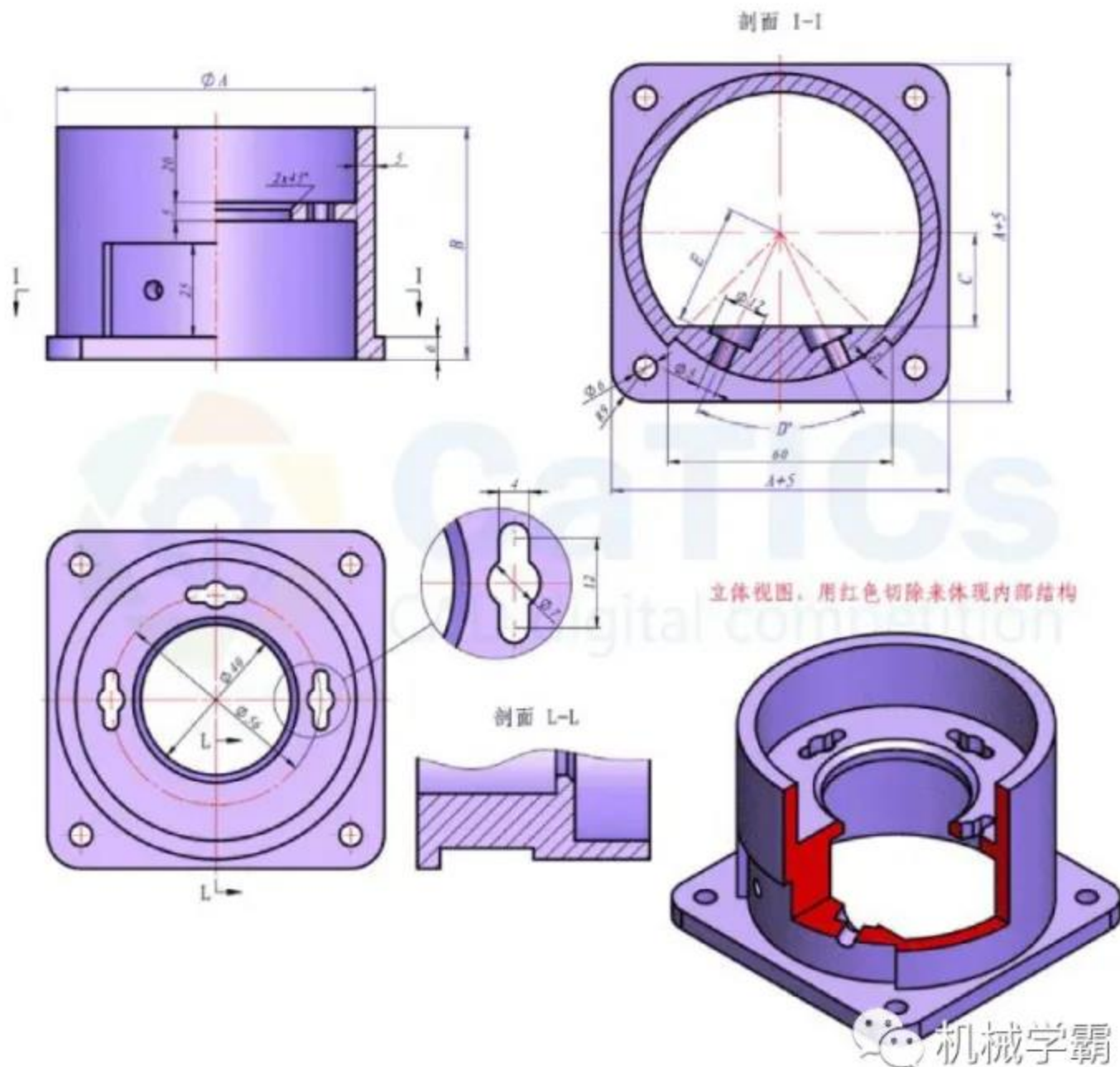
$A=85$, $B=62$, $C=25$, $D=50$, $E=32$

【问题】

1、该模型体积为多少？

【答案】

1、117619.68



机械学霸：

【题目】

参照图构建三维模型，请注意其中的对称、同心等几何关系。

【参数】

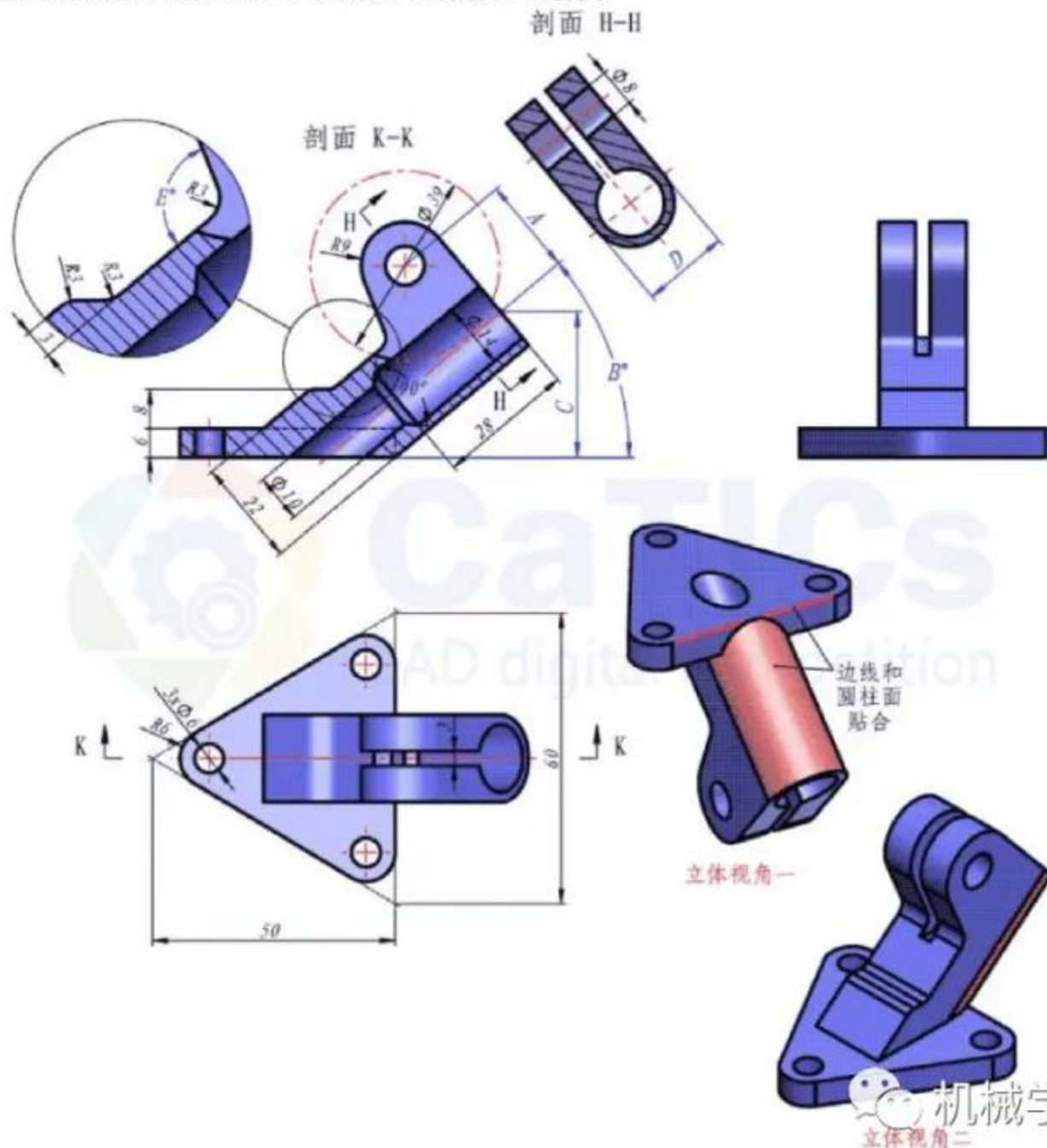
$A=20$, $B=40$, $C=30$, $D=18$, $E=108$

【问题】

1、模型的体积是多少？

【答案】

1、18991.26



机械学霸：拉伸、抽壳

【题目】

参照图构建零件模型，注意其中的绿色部分的壁厚均为G。注意其中的相切、阵列、同心等关系。

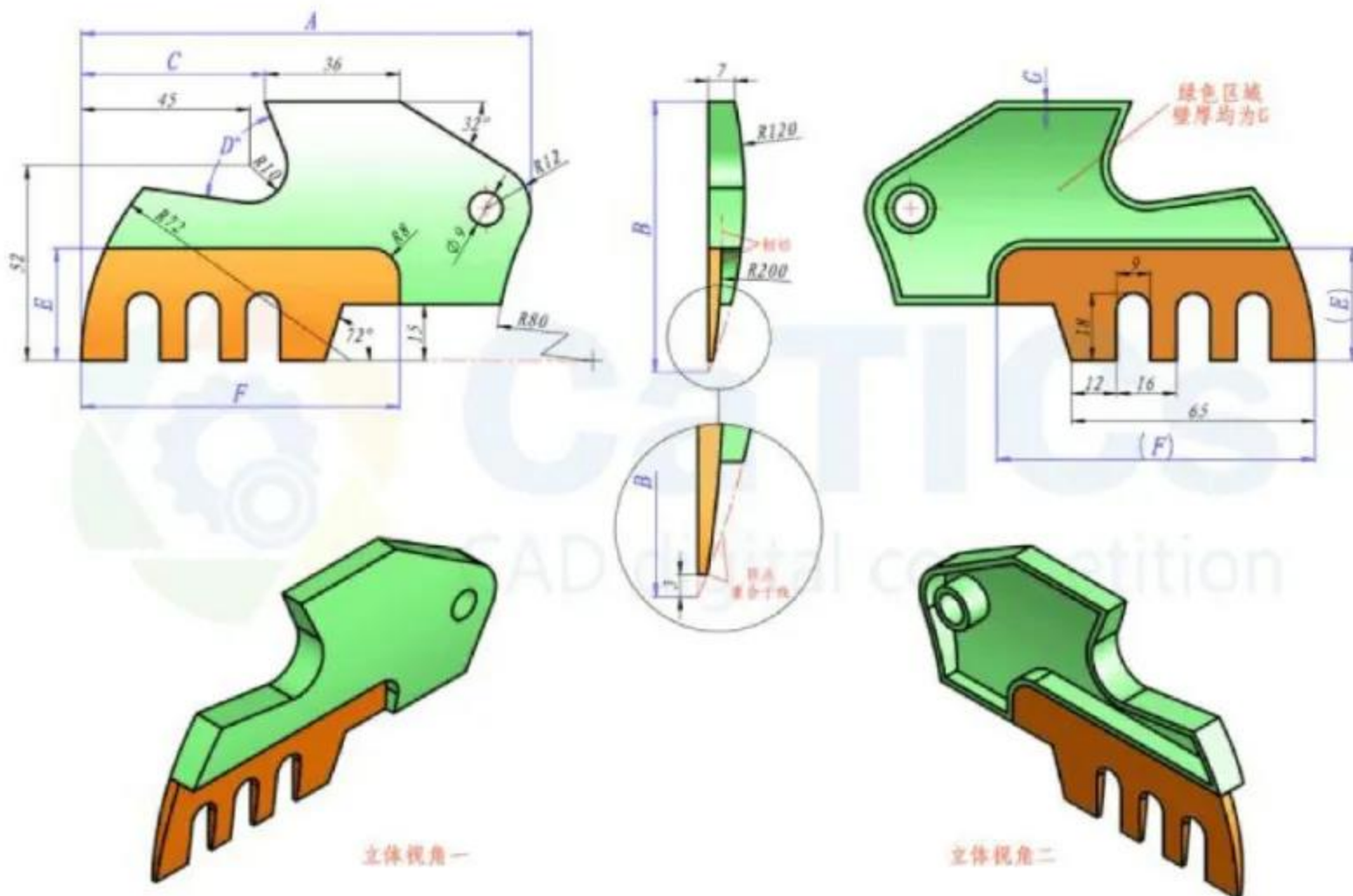
【参数】

$A=120$, $B=72$, $C=49$,

$D=60$, $E=30$, $F=85$, $G=2$

【问题】

1、模型的体积是多少？



机械学霸：

【几何】宽度为D的槽深度为12。K视角为垂直于上表面的观察方向。

【参数】

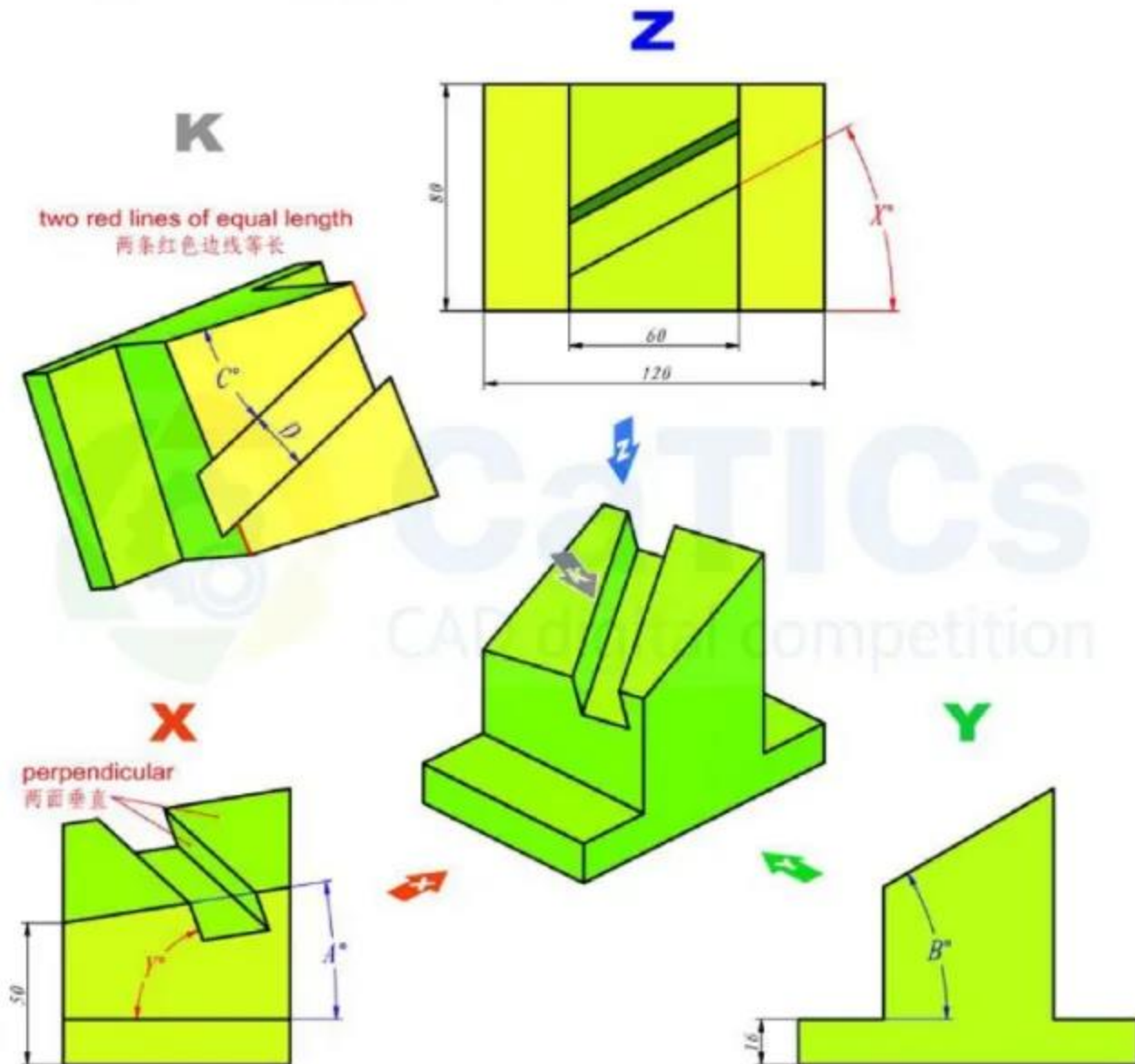
A=9 B=30 C=26 D=22

【问题】

- 1、请问 X（视图 Z 中的投影角度，并非两个边线的空间角度）为多少度？
- 2、请问 Y 为多少度？
- 3、请问模型的体积为多少？

【答案】

1、28.25 2、69.95 3、410748.27



机械学霸：

【注意】其中对称、同心、相切等几何关系。【其他】同色短线长度相等。（题图为示意图，只用于表达尺寸和几何关系，由于参数变化，其形态会有所变化。）（输入答案时请精确到小数点后两位）

【参数】

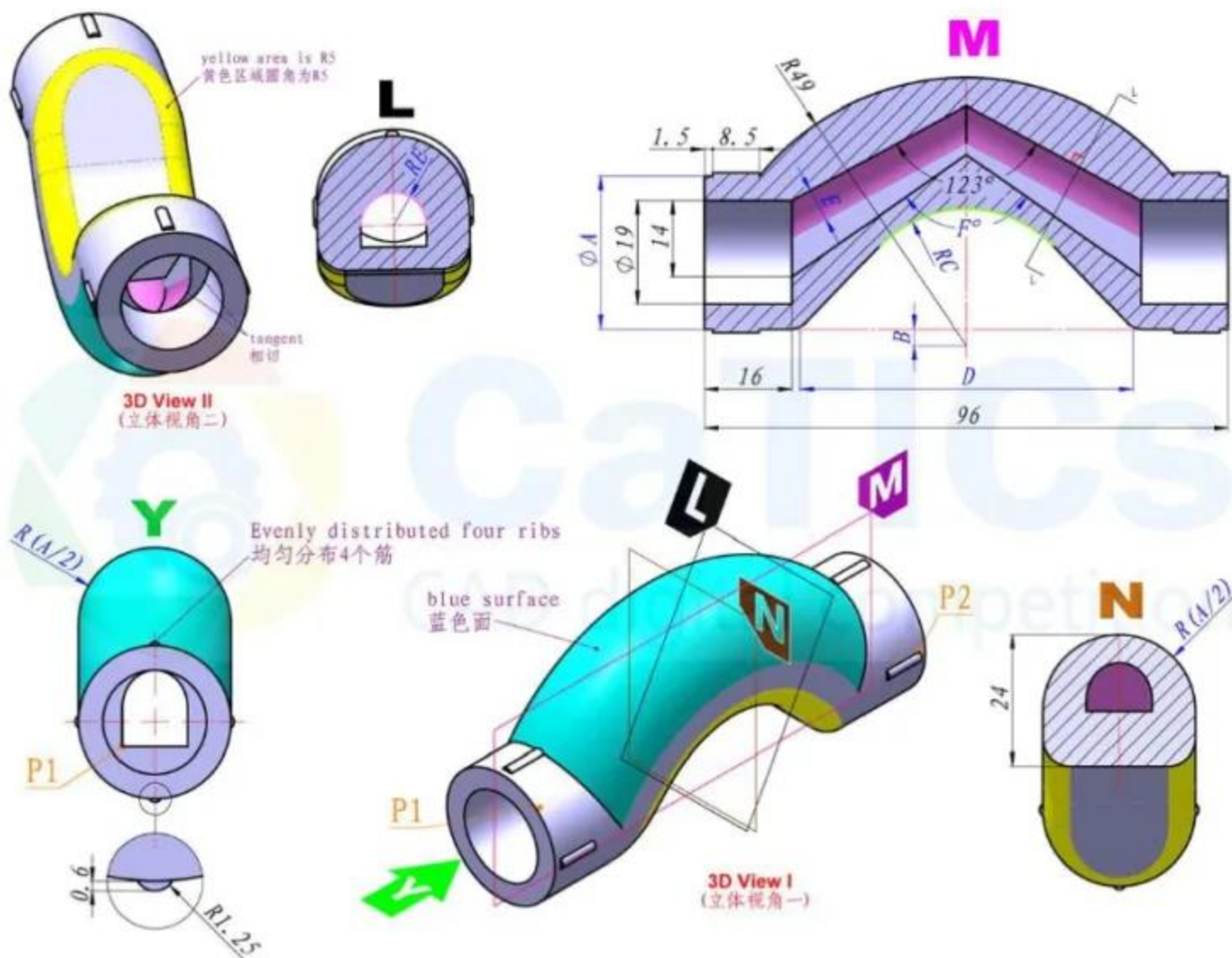
$A=28, B=3, C=22, D=61, E=6, F=110$

【问题】

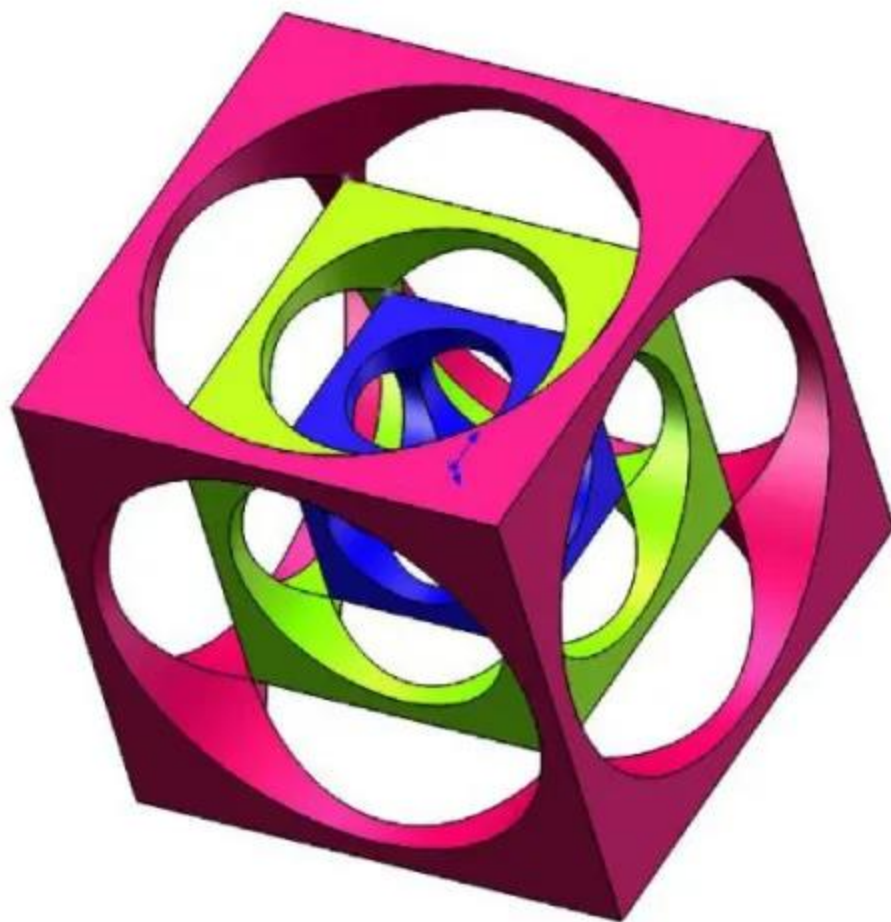
- 1、请问图中 P1 到 P2 的距离是多少？
- 2、请问图中蓝色区域的面积是多少？
- 3、请问模型体积是多少？

【答案】1、81.19 2、3625.94

3、48073.595



机械学霸： 拉 伸、拉伸切



机械学霸：拉伸、 圆角、扫描切

【题目】

参照下图构建三维模型，注意其中的对称、相切、同心、阵列等几何关系。

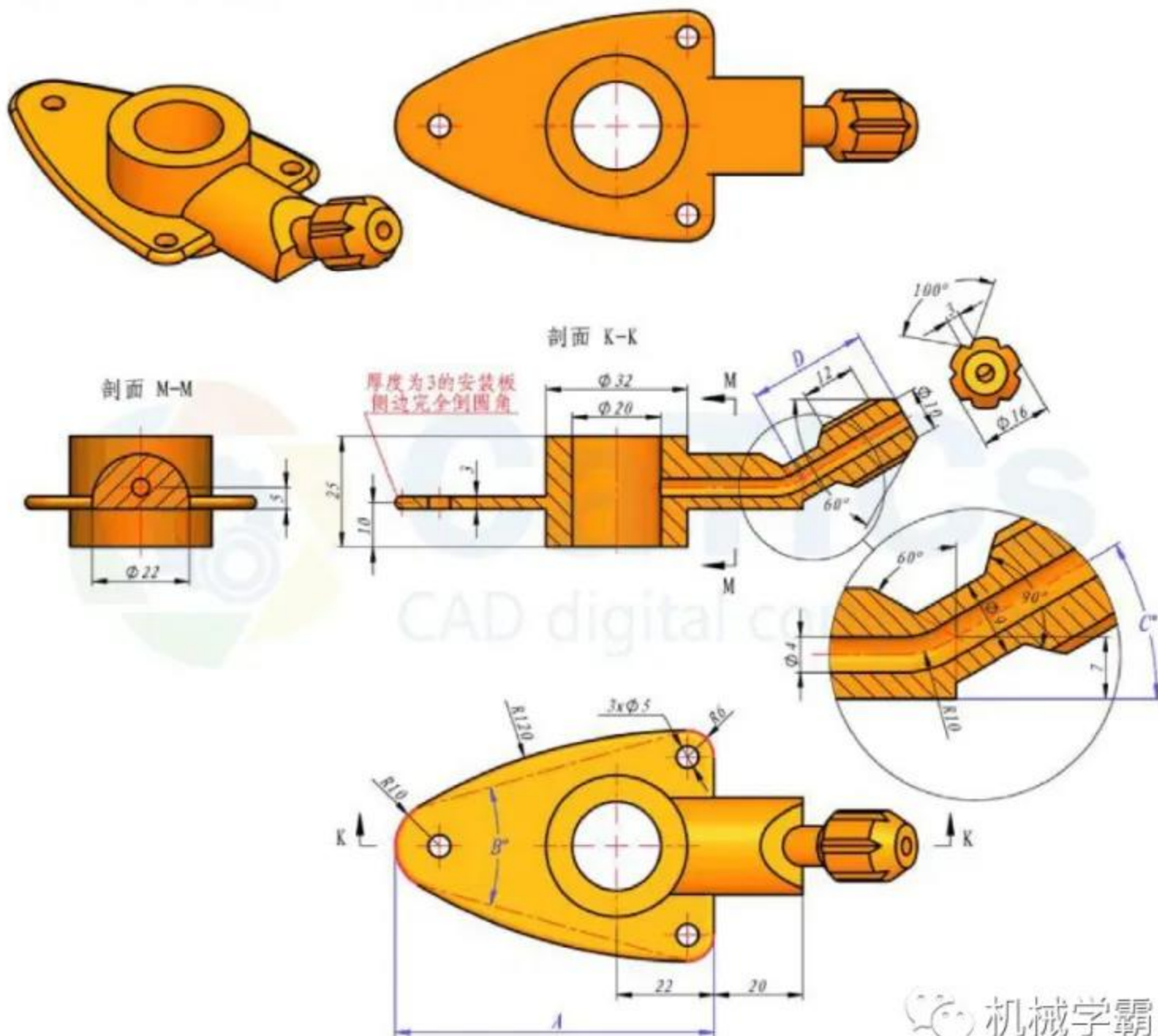
【参数】

A=72, B=32, C=30, D=27

【问题】

1、零件模型体积为多少？

【答案】1、26369.97



机械学霸：旋转、拉伸、 抽壳、孔

【题目】

参照图构建模型，注意除去底部 8mm 厚的区域外，其他区域壁厚都是 5mm。注意模型中的对称、阵列、相切、同心等几何关系。

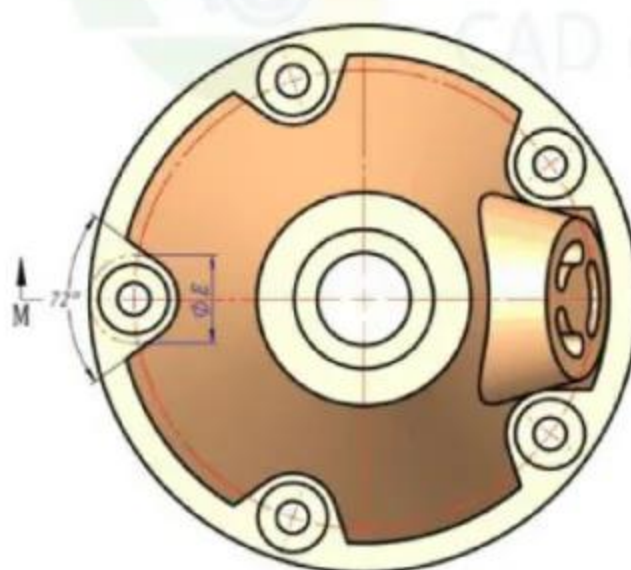
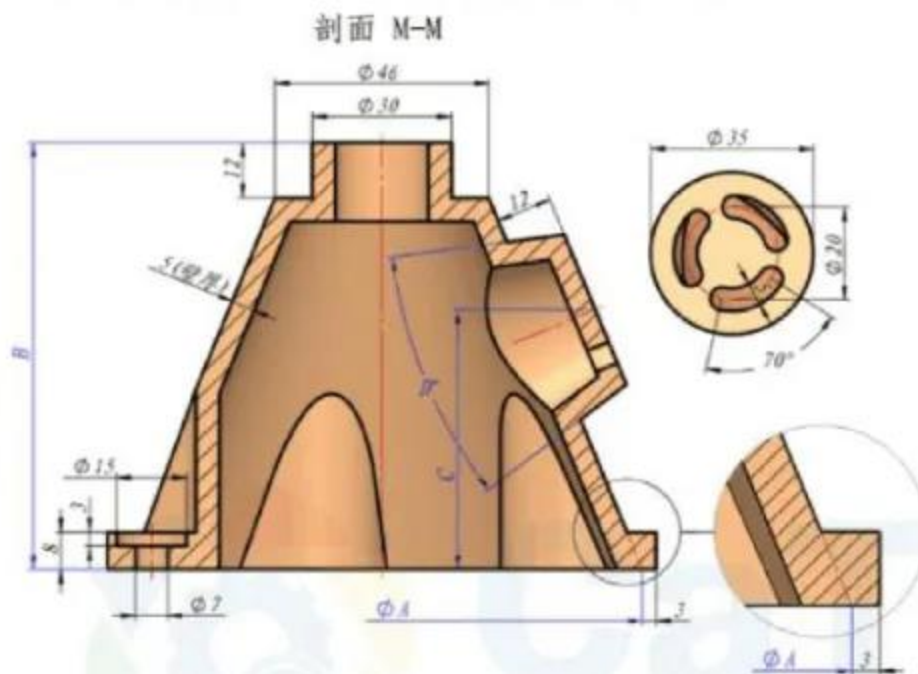
【参数】

A=112, B=92, C=56, D=30, E=19

【问题】

1、模型体积为多少？

【答案】1、136708.44



机械学霸：拉伸、拉伸

【题目】

参照图构建三维模型，请注意其中的偏距、同心、重合等约束关系。

【参数】

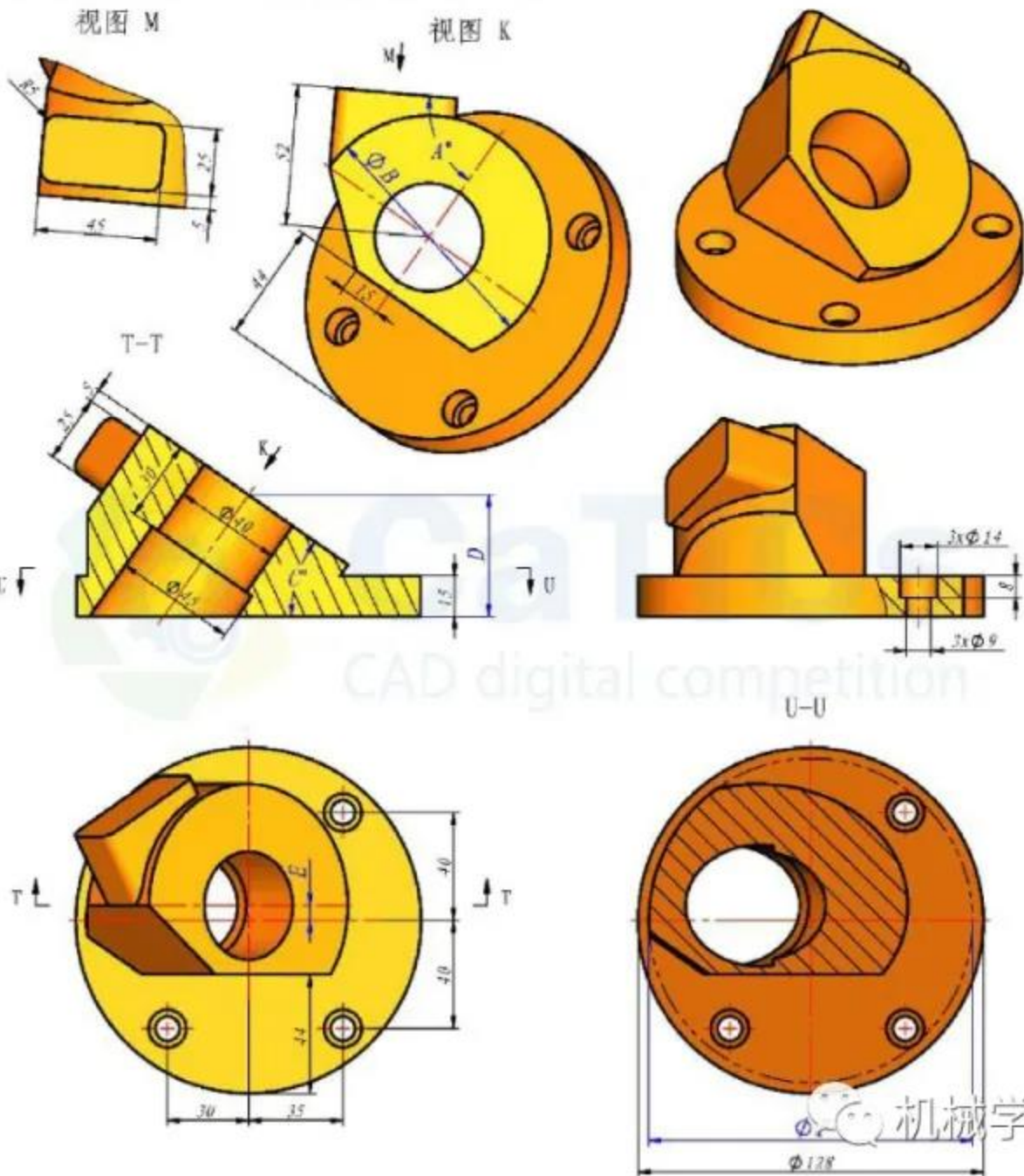
$A=55$, $B=87$, $C=37$, $D=43$, $E=5.9$, $F=119$

【问题】

1、模型体积为多少？

【答案】

1、281405.55



机械学霸：拉伸、抽壳、 扫描

【题目】

参照图构建模型，注意其中的对称、相切、同心等约束关系。

【参数】

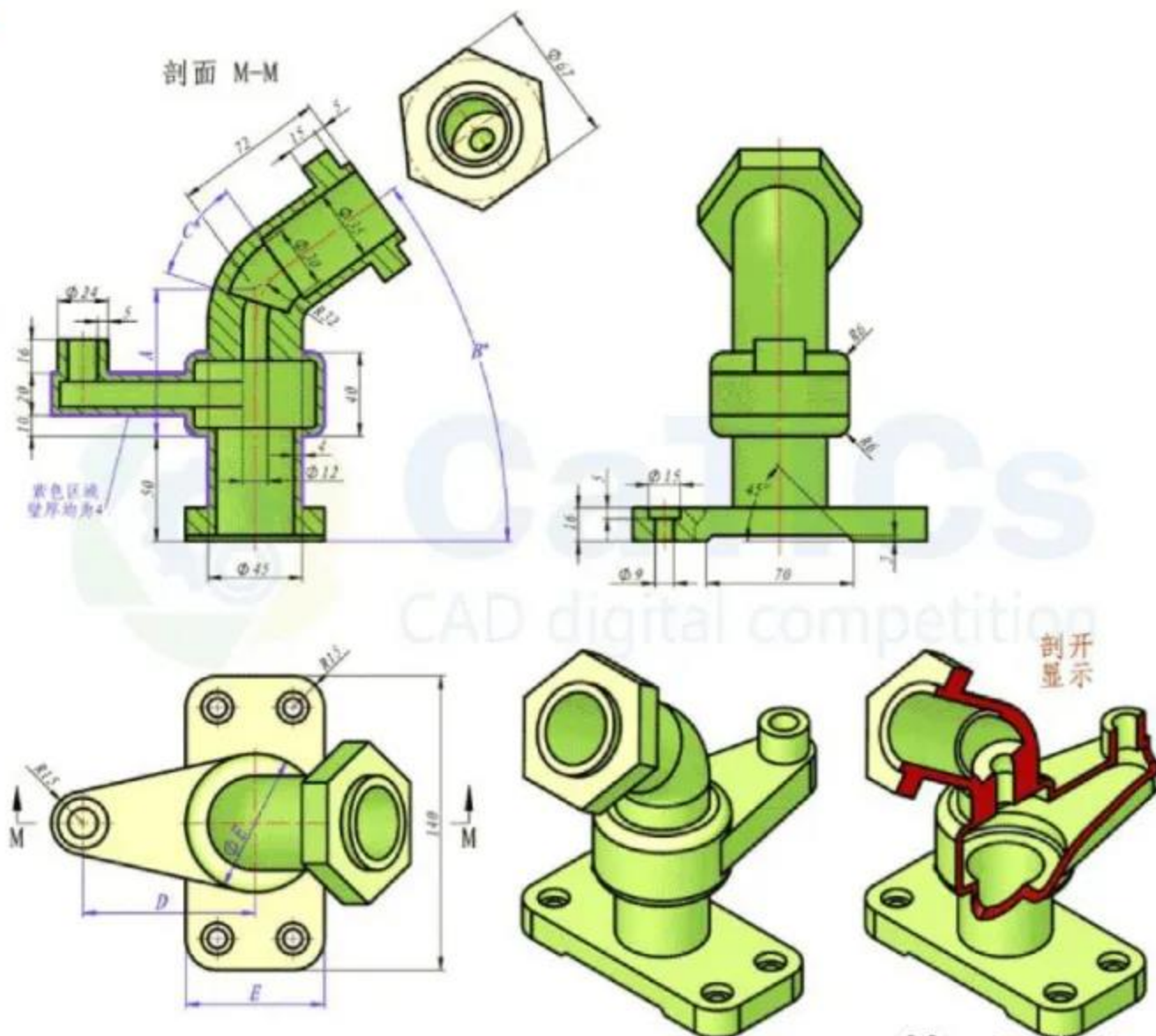
A=70, B=36, C=36, D=82, E=66

【问题】

1、模型体积为多少？

【答案】

1、326673.48



机械学霸：拉伸、拉伸切

【题目】

参照图构建立体模型，请注意其中孔均为贯穿孔。

【参数】

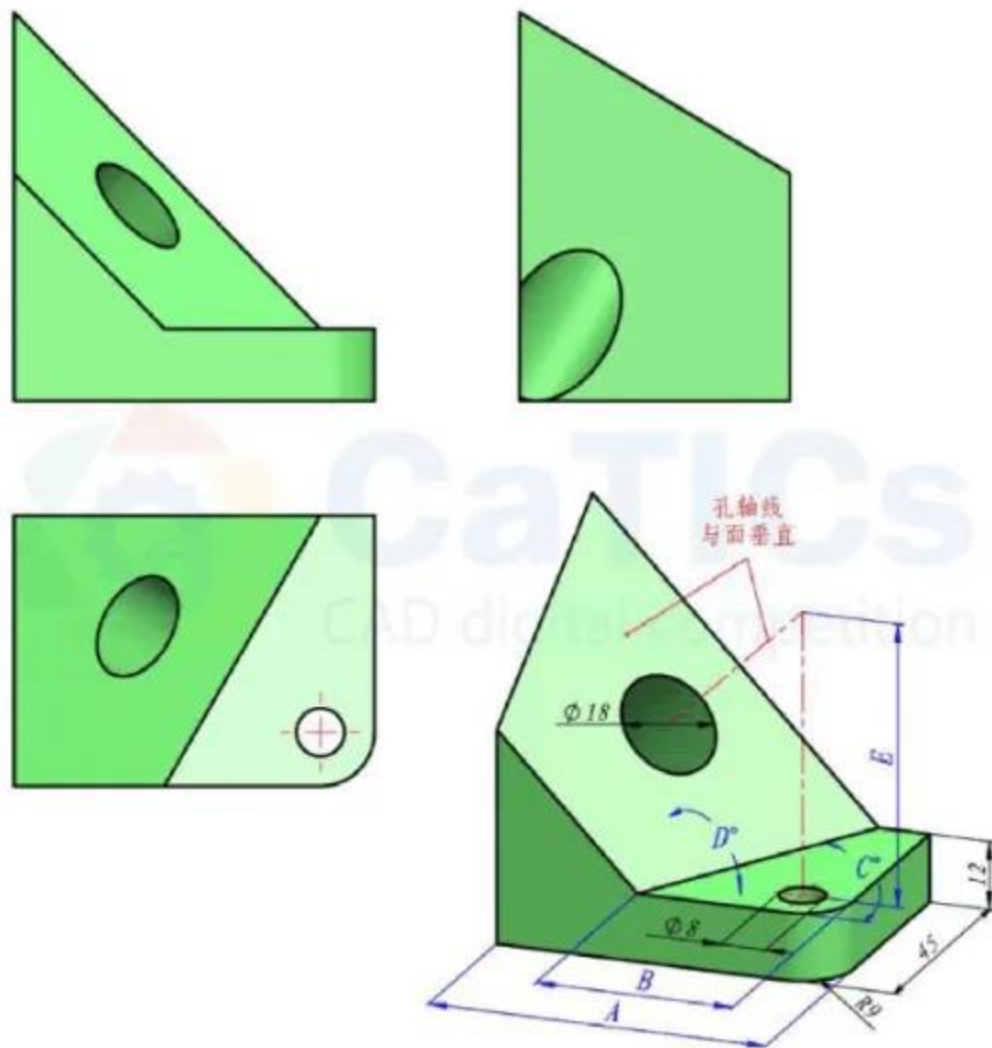
$A=60$, $B=35$, $C=60$, $D=130$, $E=50$

【问题】

1、模型体积为多少？

【答案】

1、58667.20



机械学霸：

【题目】

参照图构建三维模型，其中未标注的厚度（或偏距）均为 A 。注意模型中的同心、对称等几何关系。

【参数】

$A=1$, $B=16$, $C=60$, $D=22$,

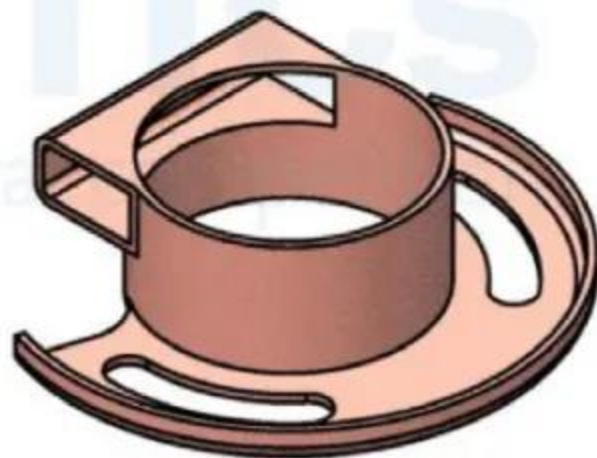
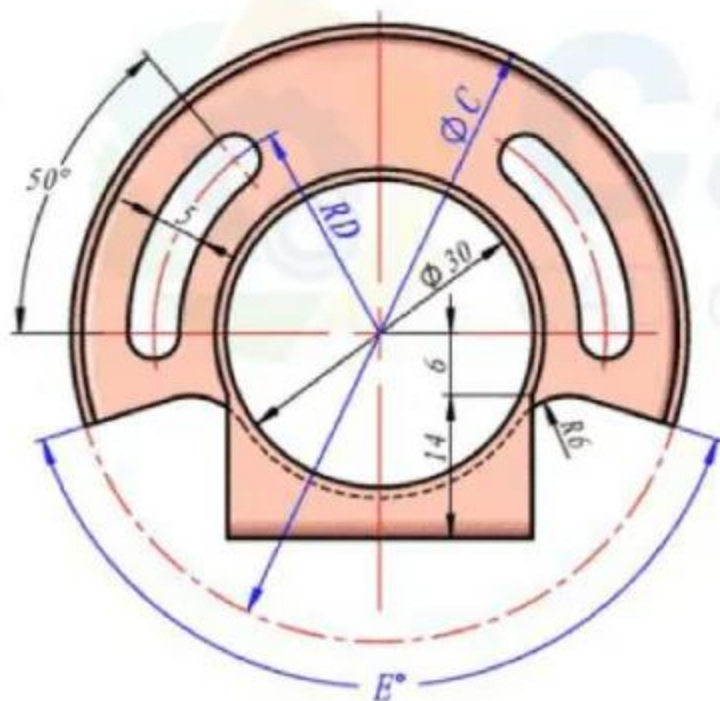
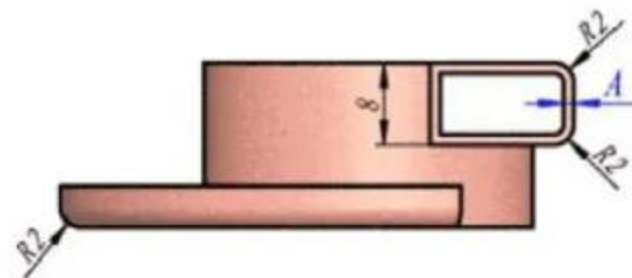
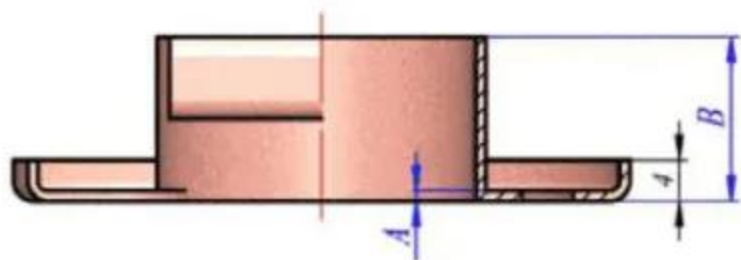
$E=145$

【问题】

1、模型的体积是多少？

【答案】

1、3143.55



立体视角

机械学霸：拉伸、 旋转切、孔

【题目】

参照图构建零件。注意其中的重合、同心、相切等几何关系。

【参数】

$A=45$, $B=16$, $C=136$, $D=45$,

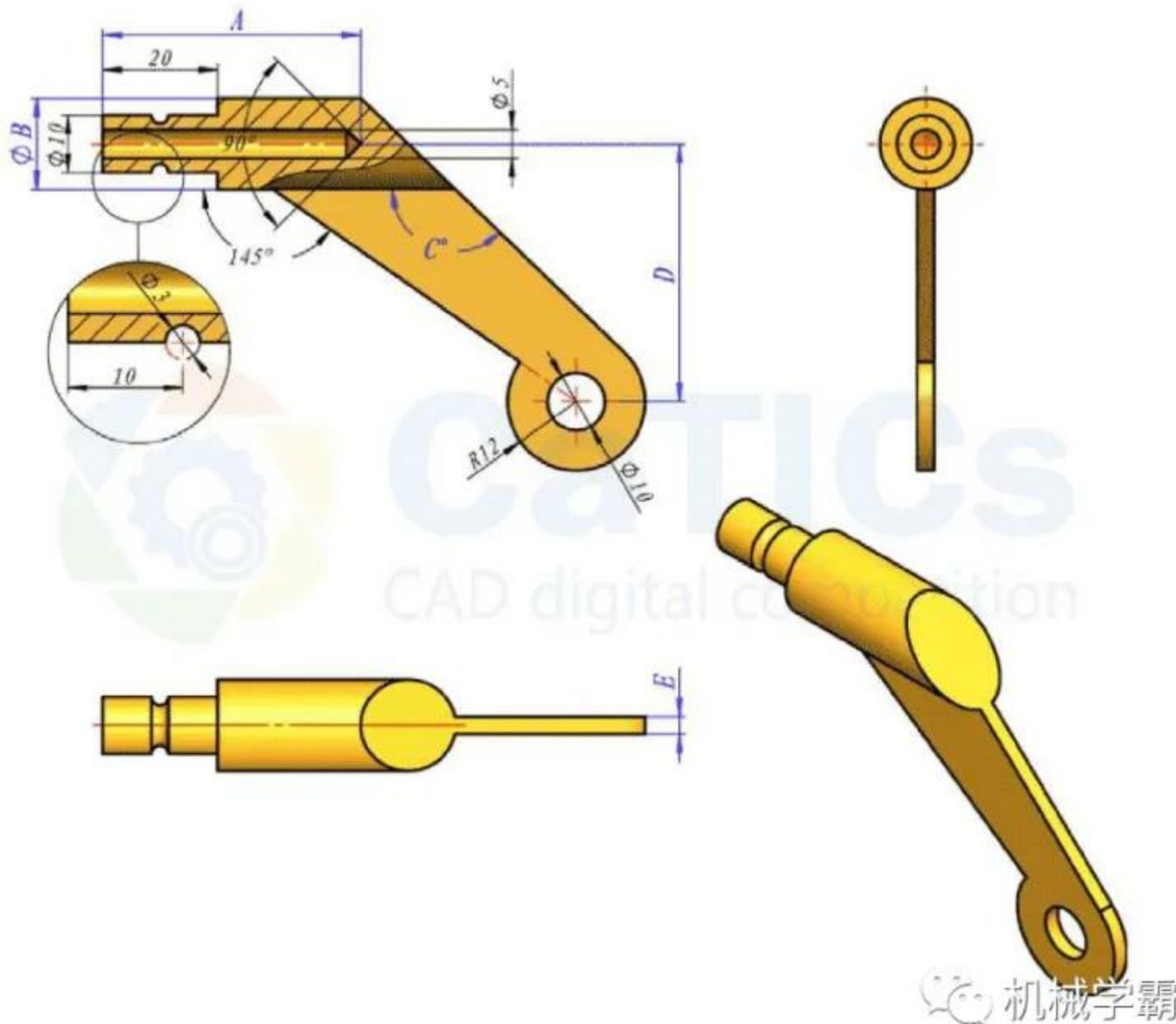
$E=3$

【问题】

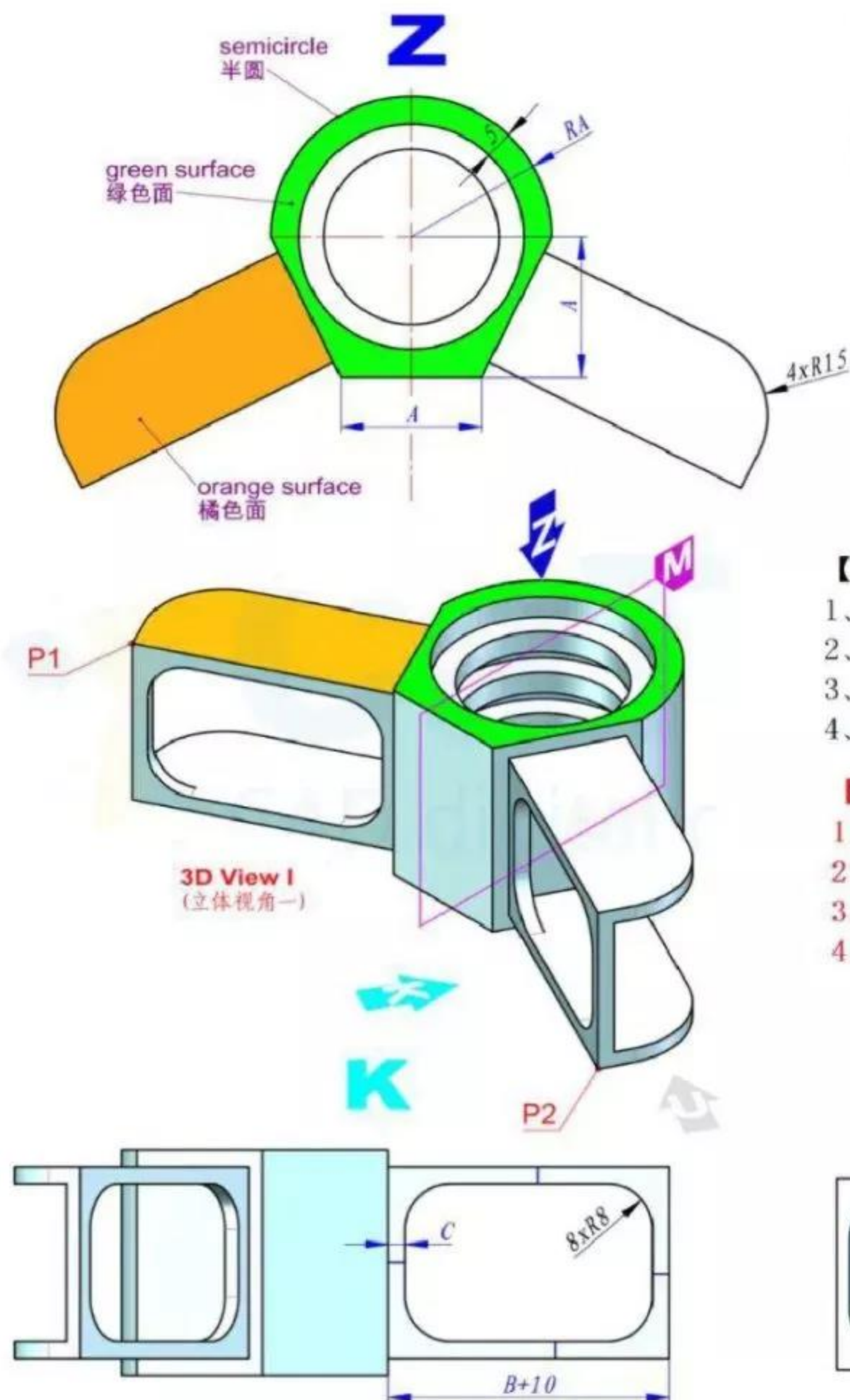
1、模型的体积是多少？

【答案】

1、10568.17



机械学霸：方程

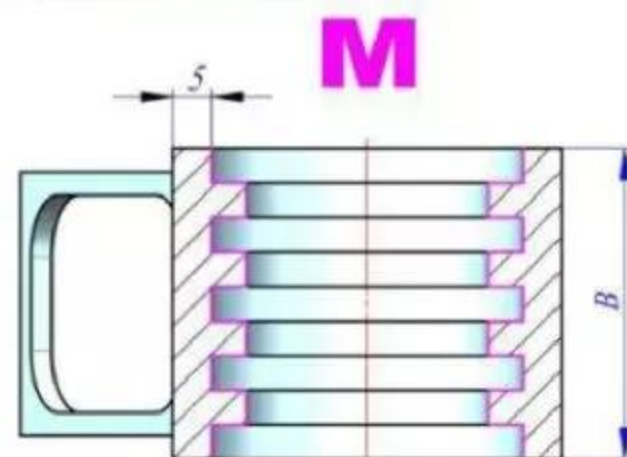


【题目】练习 3D16-M01

【注意】其中等距、对称等几何关系。

【其他】同色短线长度相等。

【参数】 $A=25$, $B=40$, $C=3$

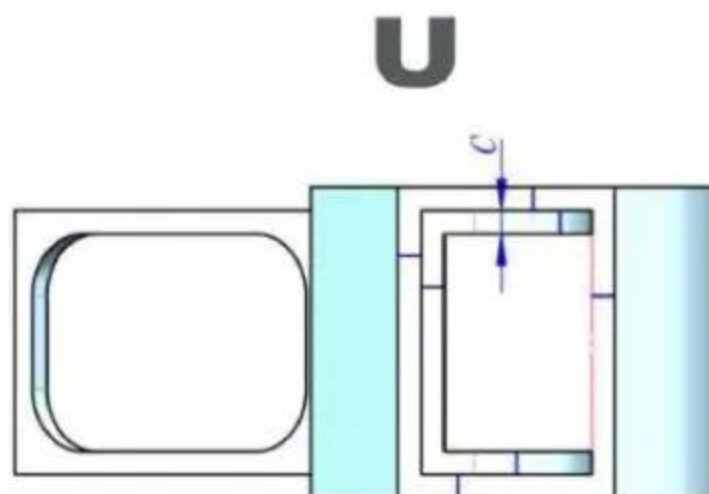


【问题】

- 1、请问图中P1到P2的距离是多少？
- 2、请问图中橘色区域的面积是多少？
- 3、请问图中绿色区域的面积是多少？
- 4、请问模型体积是多少？

【答案】

- 1、121.96
- 2、1049.26
- 3、662.61
- 4、49258.9



机械学霸：旋转、扫描、抽壳、拉伸

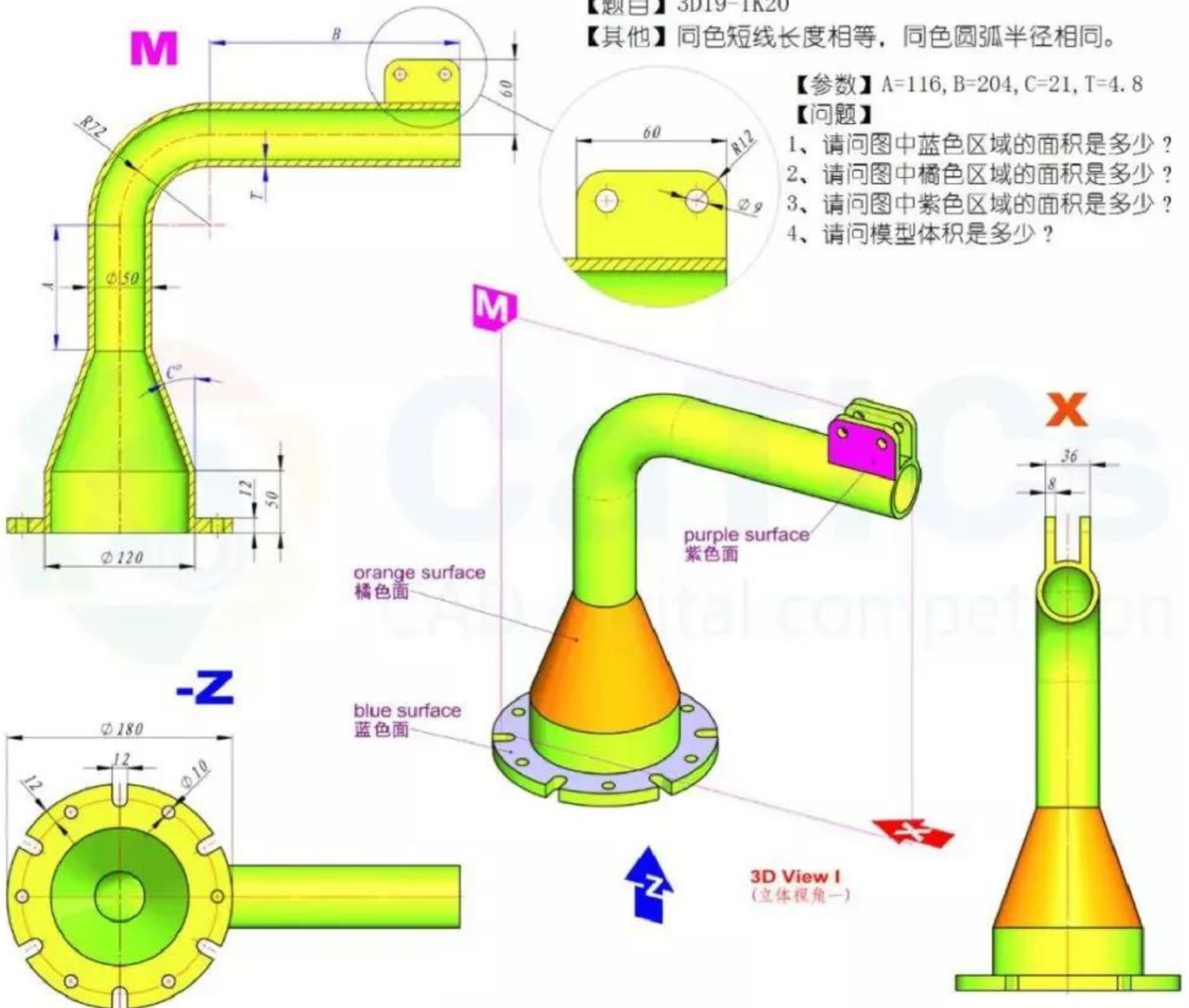
【题目】 3D19-TK20

【其他】 同色短线长度相等，同色圆弧半径相同。

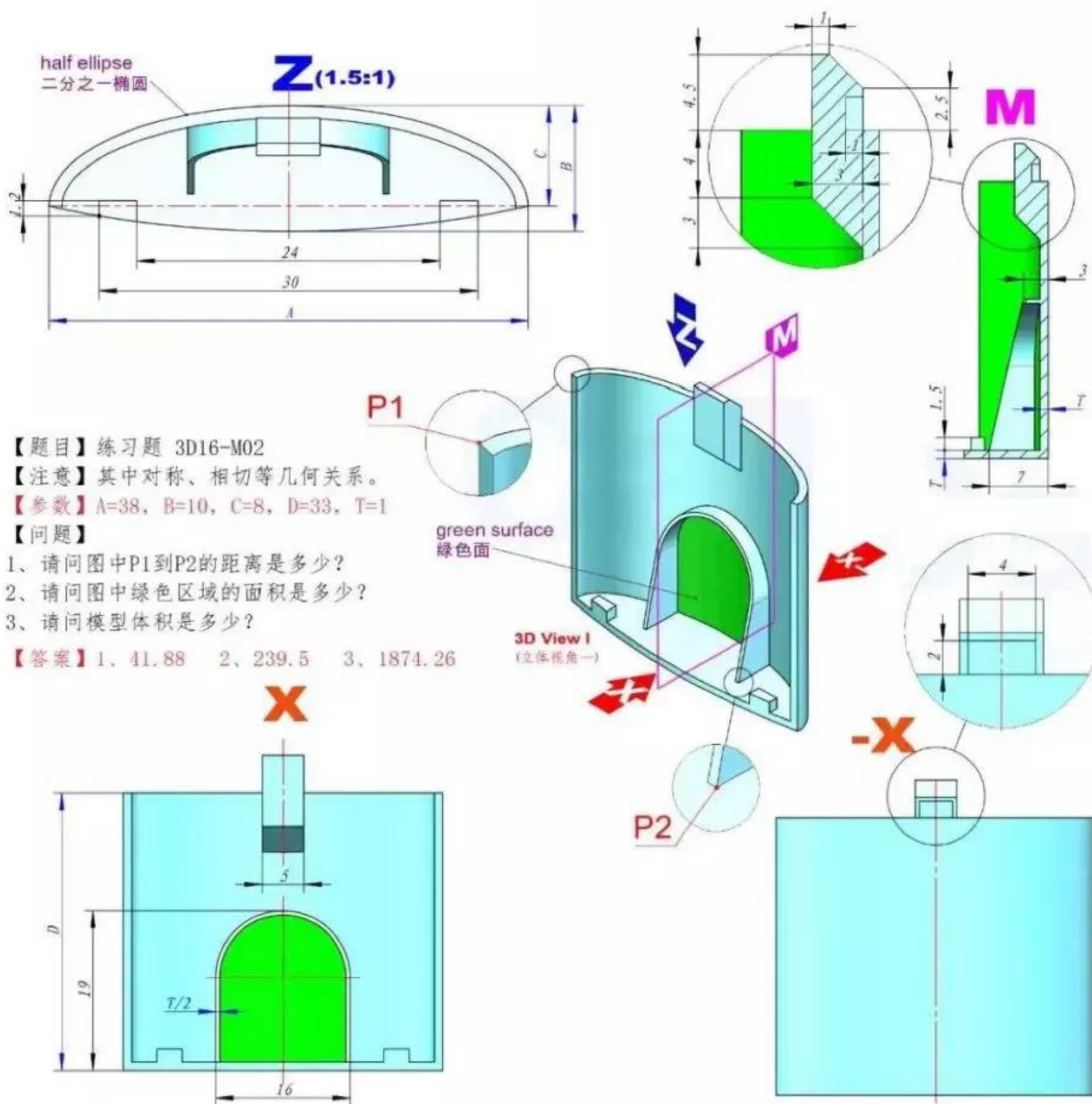
【参数】 $A=116$, $B=204$, $C=21$, $T=4.8$

【问题】

- 1、请问图中蓝色区域的面积是多少？
- 2、请问图中橘色区域的面积是多少？
- 3、请问图中紫色区域的面积是多少？
- 4、请问模型体积是多少？



机械学霸：拉伸、拉伸切



机械学霸：旋转、拉伸切、阵列

【题目】3D16-M03

【注意】其中同心、阵列、相切、共线等几何关系。

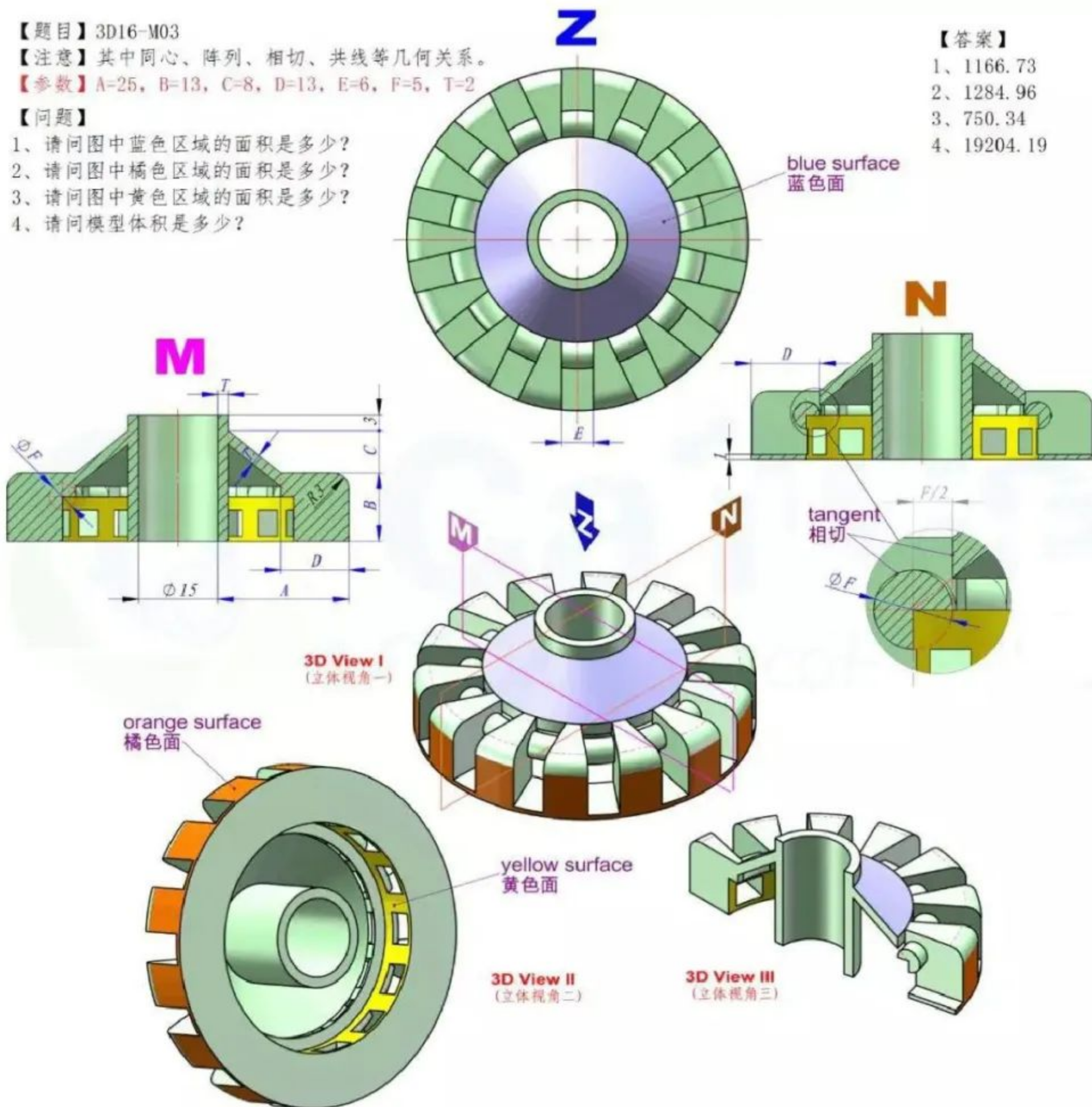
【参数】 $A=25$, $B=13$, $C=8$, $D=13$, $E=6$, $F=5$, $T=2$

【问题】

- 1、请问图中蓝色区域的面积是多少？
- 2、请问图中橘色区域的面积是多少？
- 3、请问图中黄色区域的面积是多少？
- 4、请问模型体积是多少？

【答案】

- 1、1166.73
- 2、1284.96
- 3、750.34
- 4、19204.19



机械学霸：

【注意】其中对称、相切、同心等几何关系。【其他】同色短线长度相等。

（题图为示意图，只用于表达尺寸和几何关系，由于参数变化，其形态会有所变化）（输入答案时请精确到小数点后两位）

【参数】

A=80, B=50, C=35, D=40, E=61,

T=3

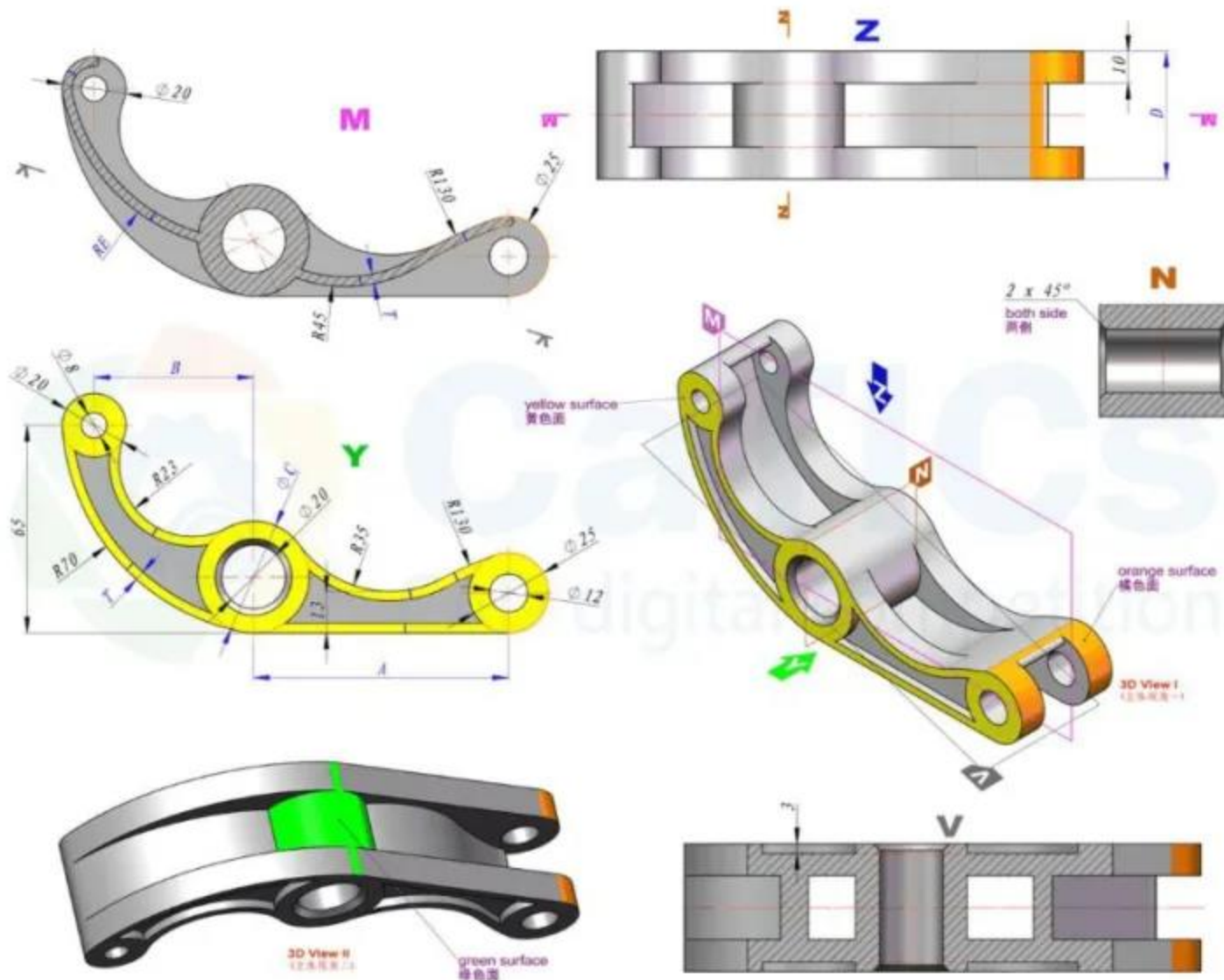
【问题】

- 1、请问图中绿色面的面积是多少？
- 2、请问图中黄色面的面积是多少？
- 3、请问图中橘色面的面积是多少？
- 4、请问模型体积是多少？

【答案】

1、903.29 2、1913.91

3、953.94 4、78731.77



机械学霸：抽壳、扫描

【题目】

【注意】其中对称、相切、等距、重合等几何关系。【其他】同色圆弧半径相同，同色短线长度相等，模型未注壁厚均为 T ，仔细观察其形态。（输入答案时请精确到小数点后两位）

【参数】

$A=170$, $B=92$, $C=50$, $D=30$, $E=30$, $T=3$

【问题】

- 1、请问图中黄色面域的面积是多少？
- 2、请问图中紫色面域的面积是多少？
- 3、请问图中蓝色面域的面积是多少？
- 4、请问图中橘色面域的面积是多少？
- 5、请问模型体积是多少？

【答案】

- 1、2242.85
- 2、894.58
- 3、9518.73
- 4、6581.4
- 5、112770.67

