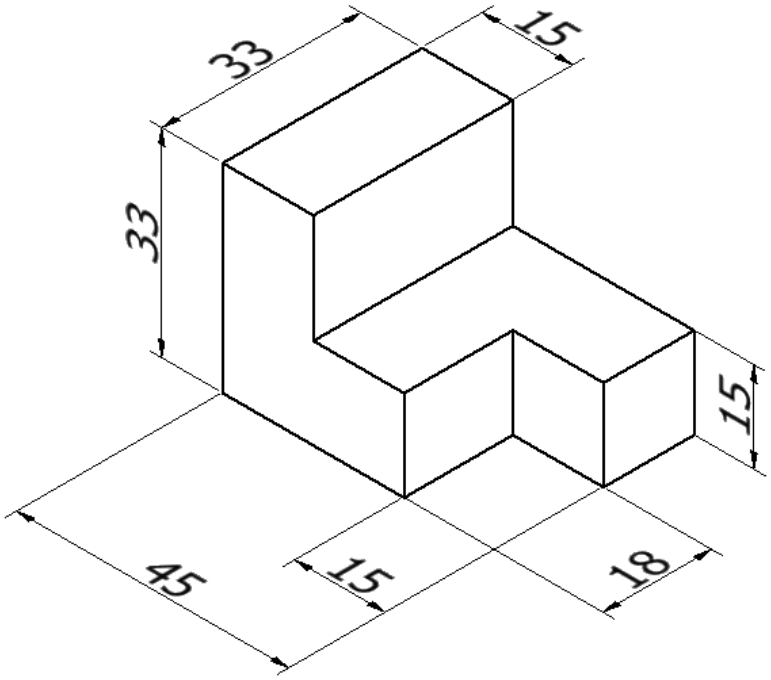
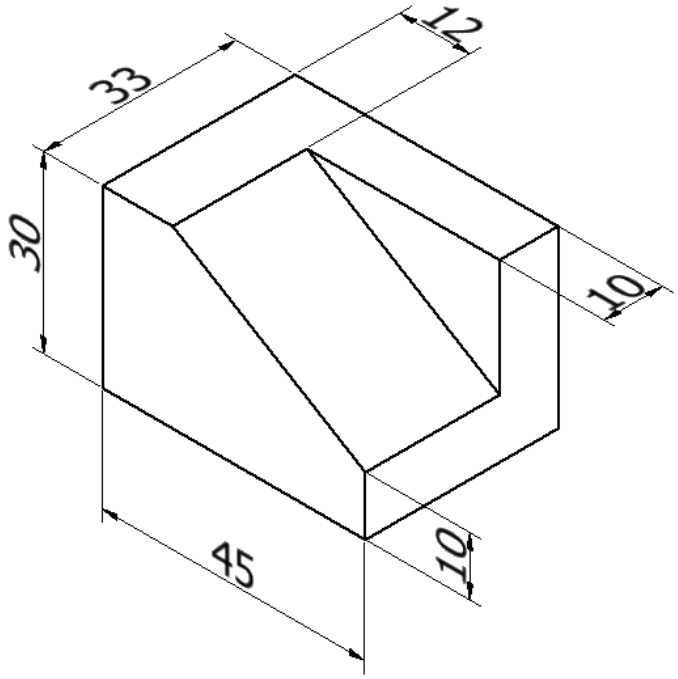
Inventor 2023 實體模型特徵練習

一、擠出特徵

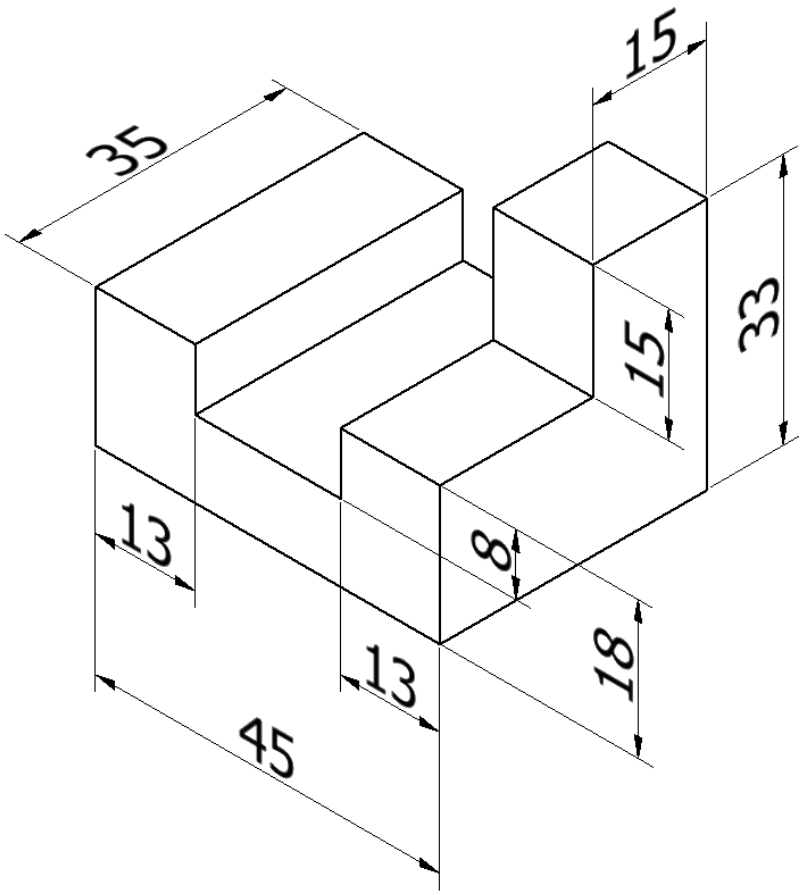
零件 1-1



零件 1-2



零件 1-3



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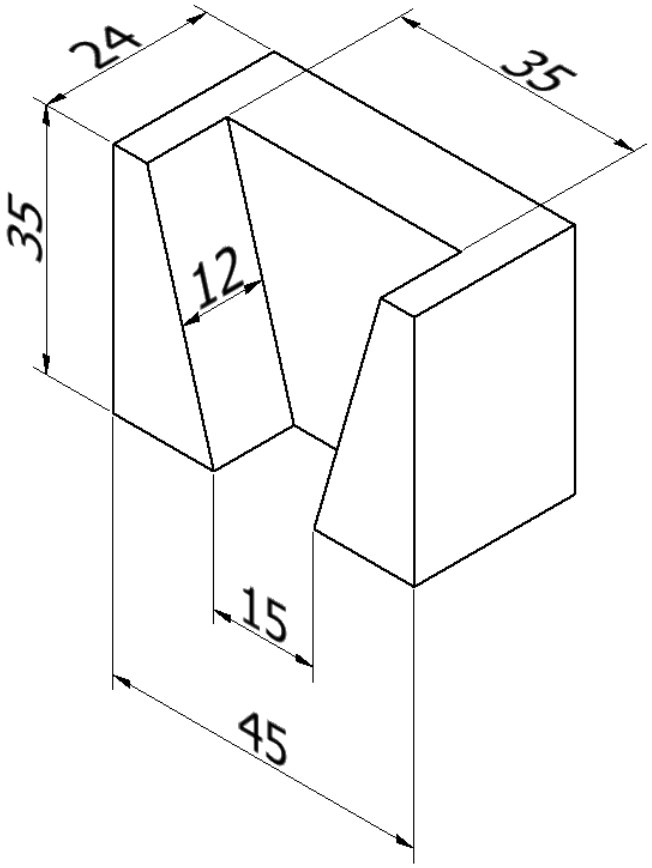
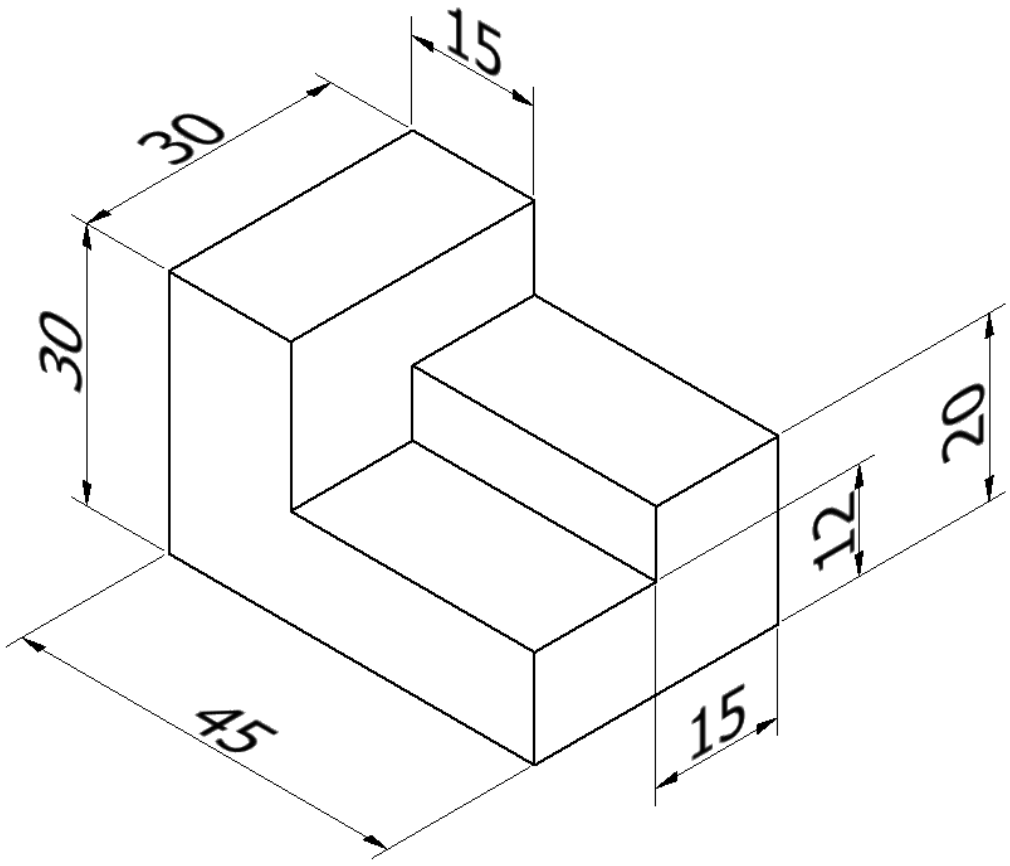


零件 1-5



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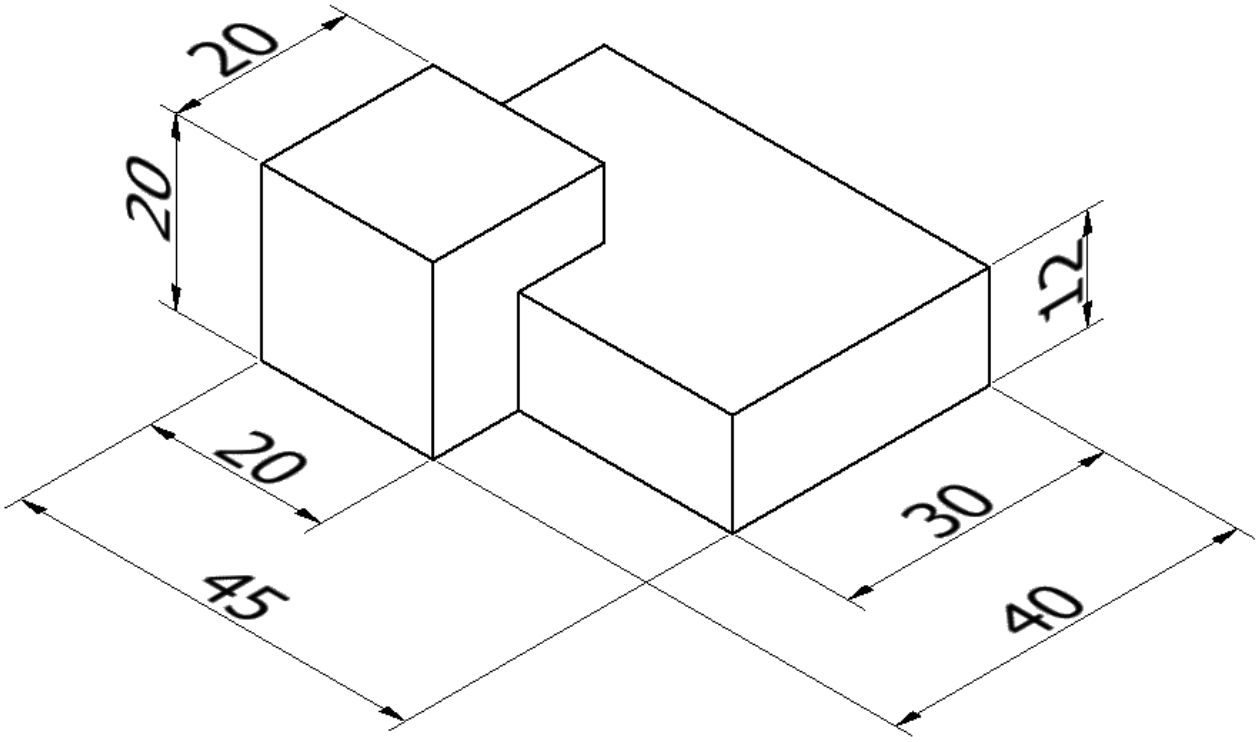
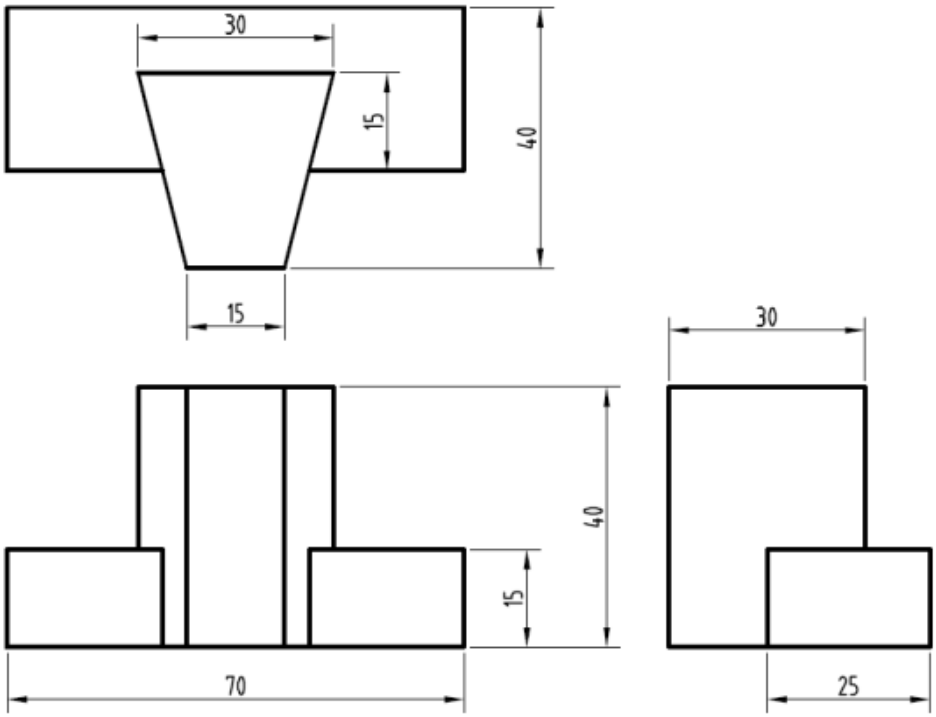
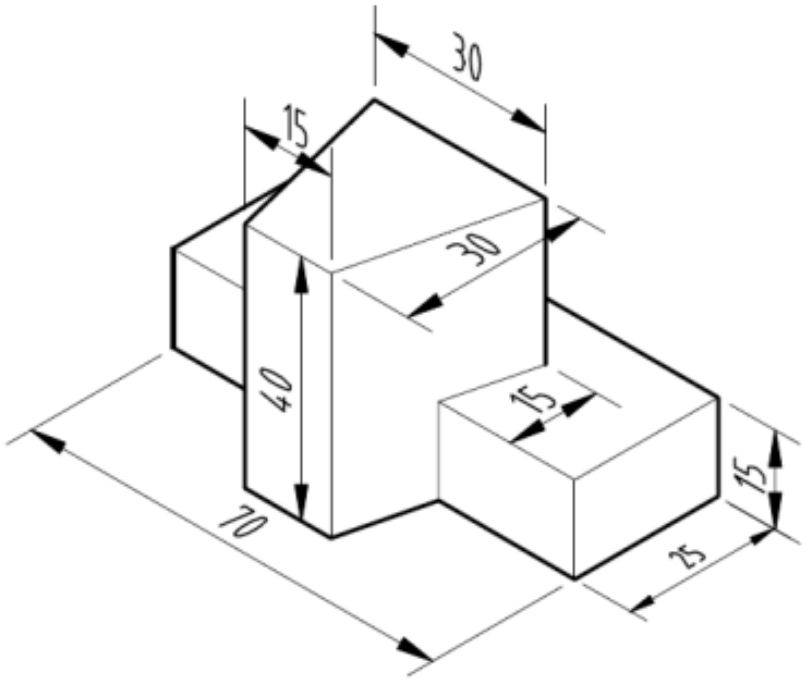
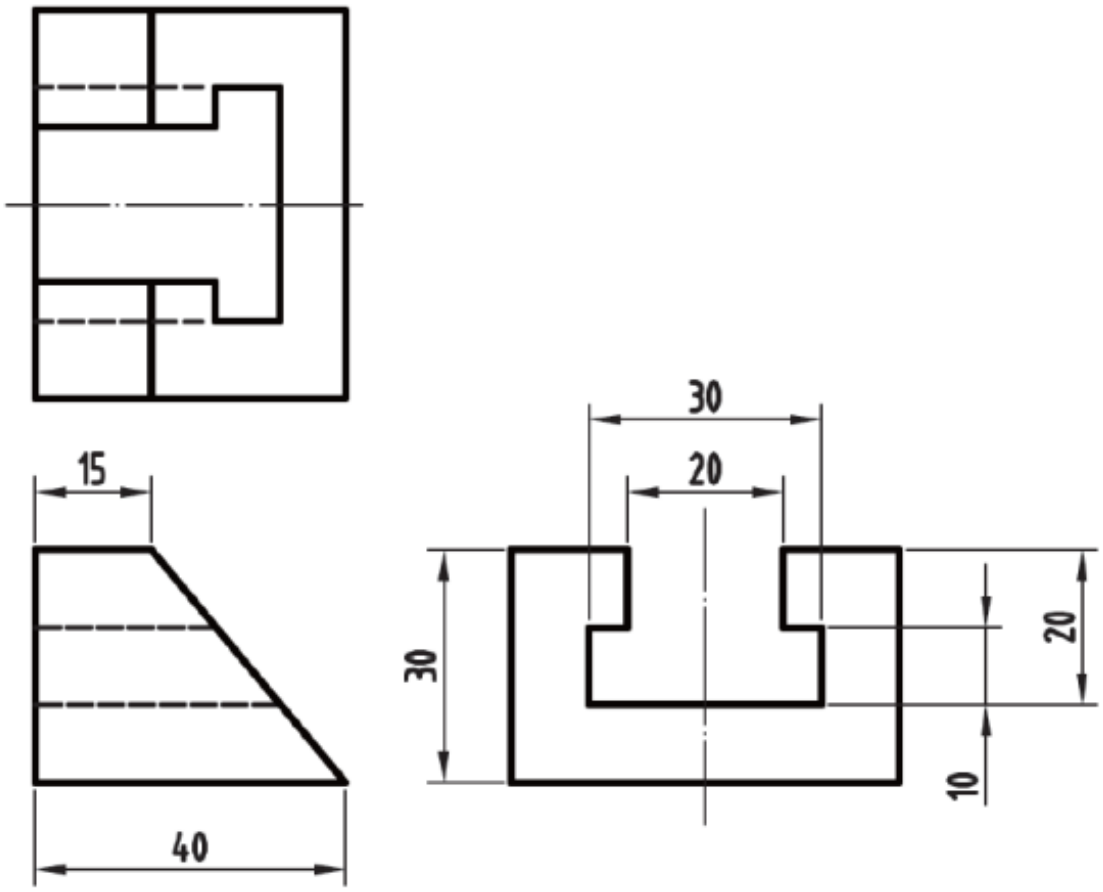


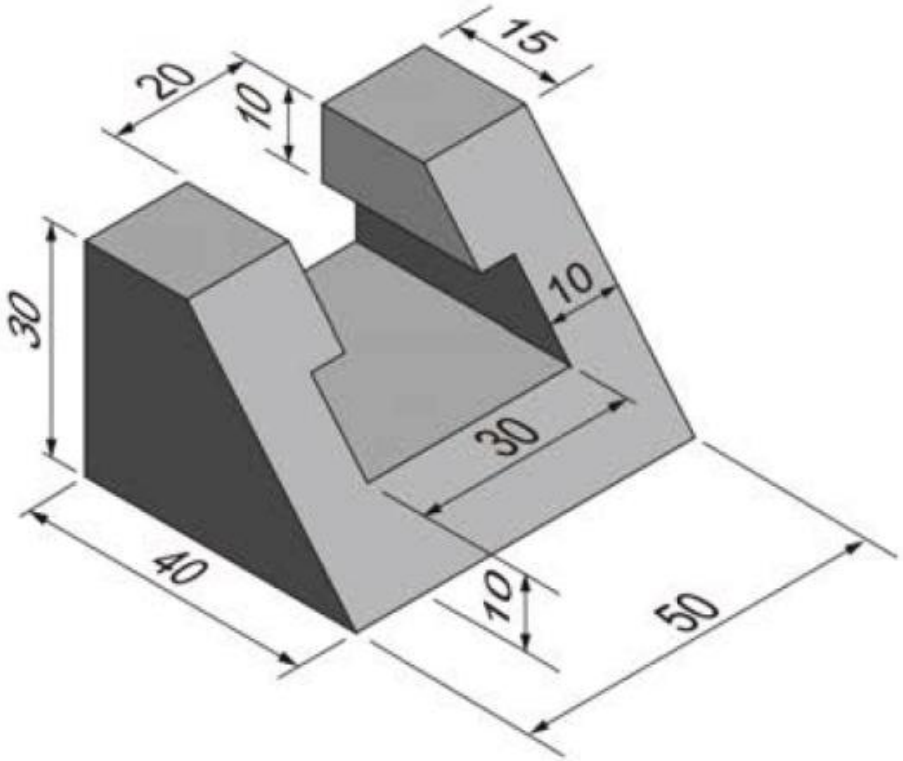
零件 1-7



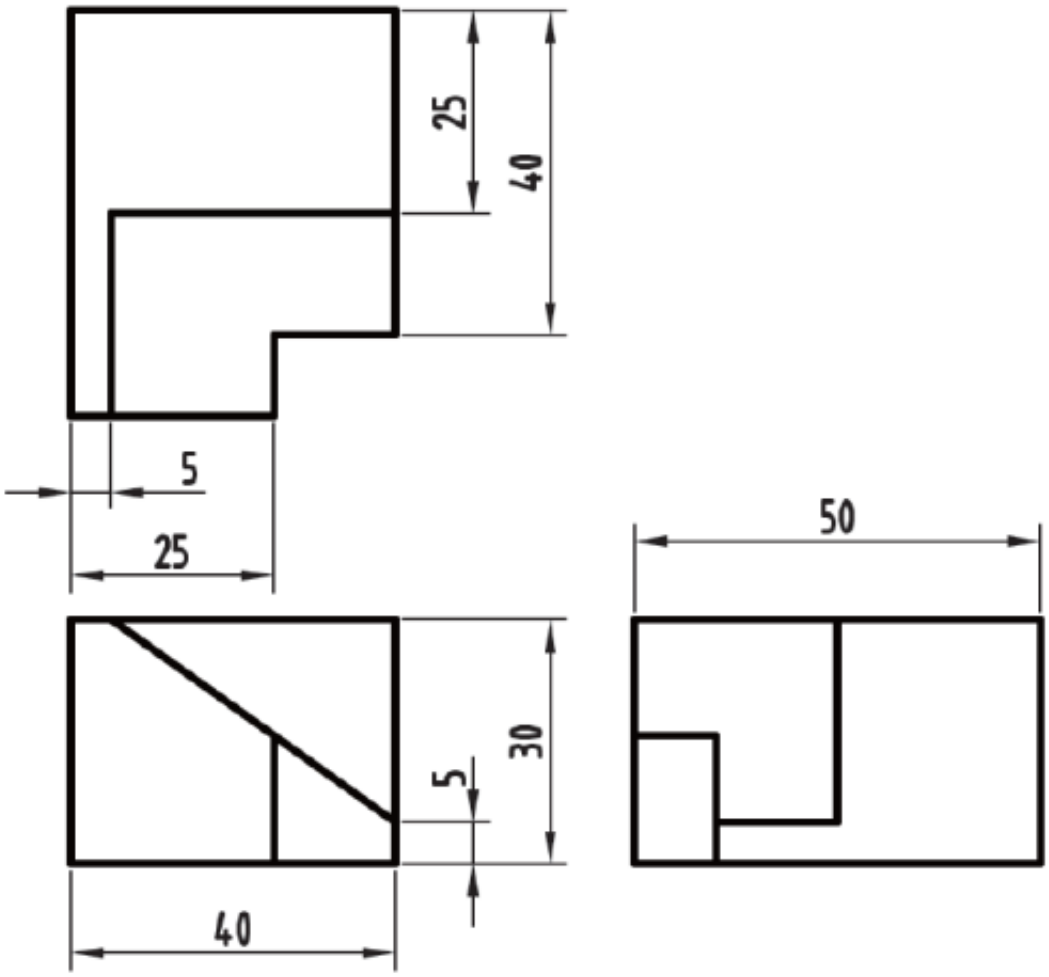


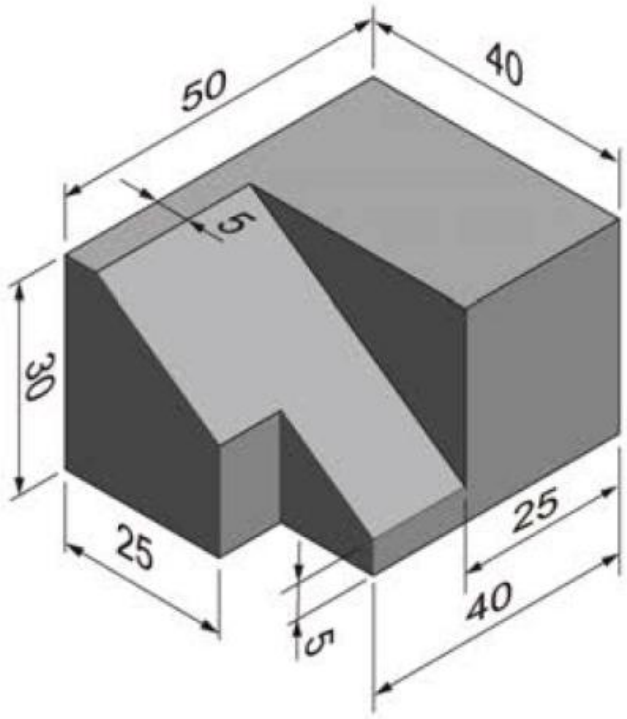
零件 1-8





零件 1-9





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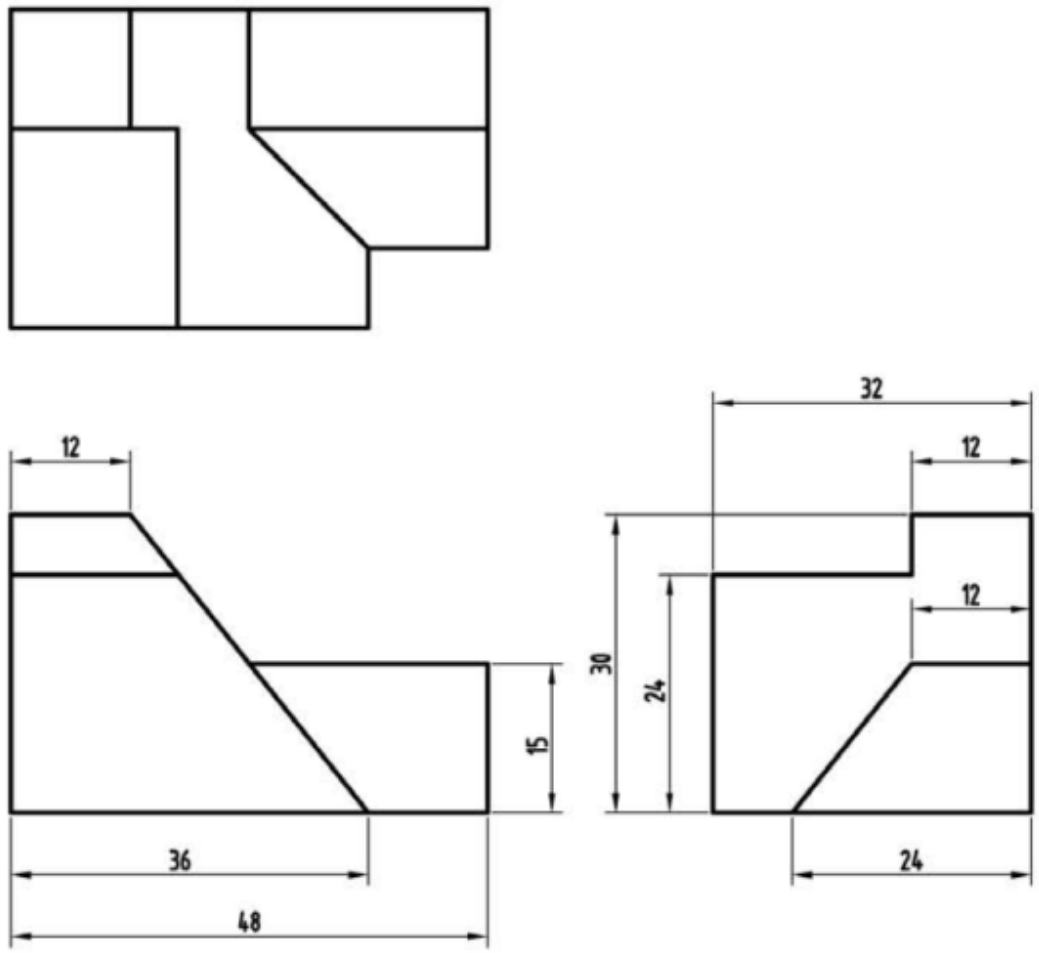

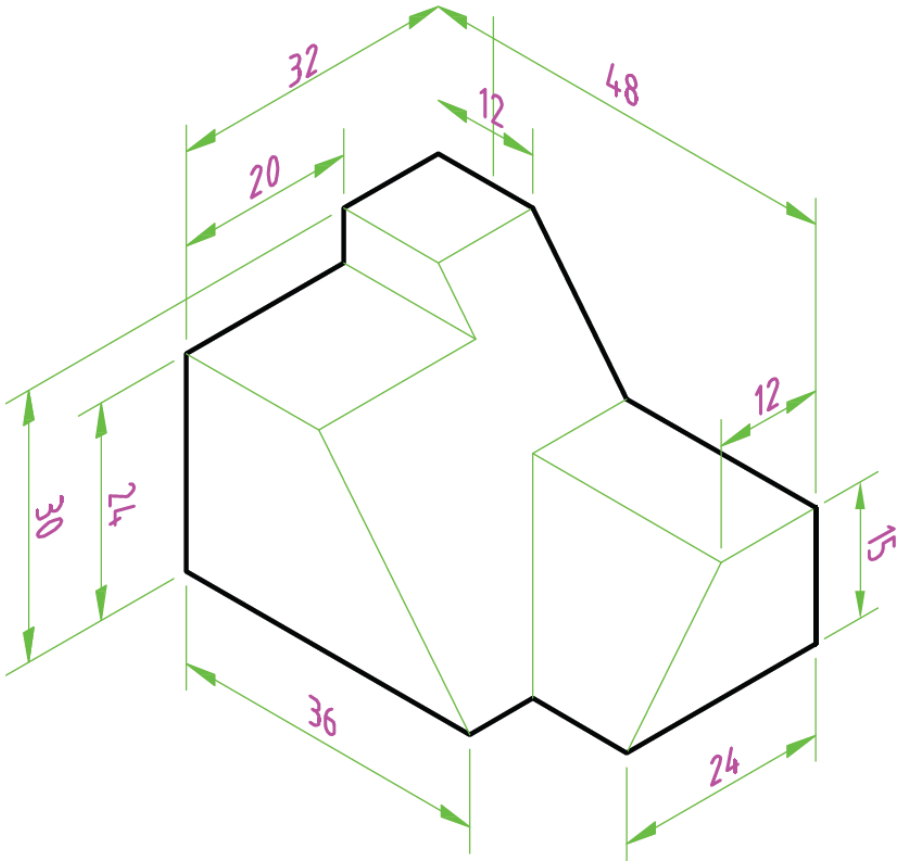

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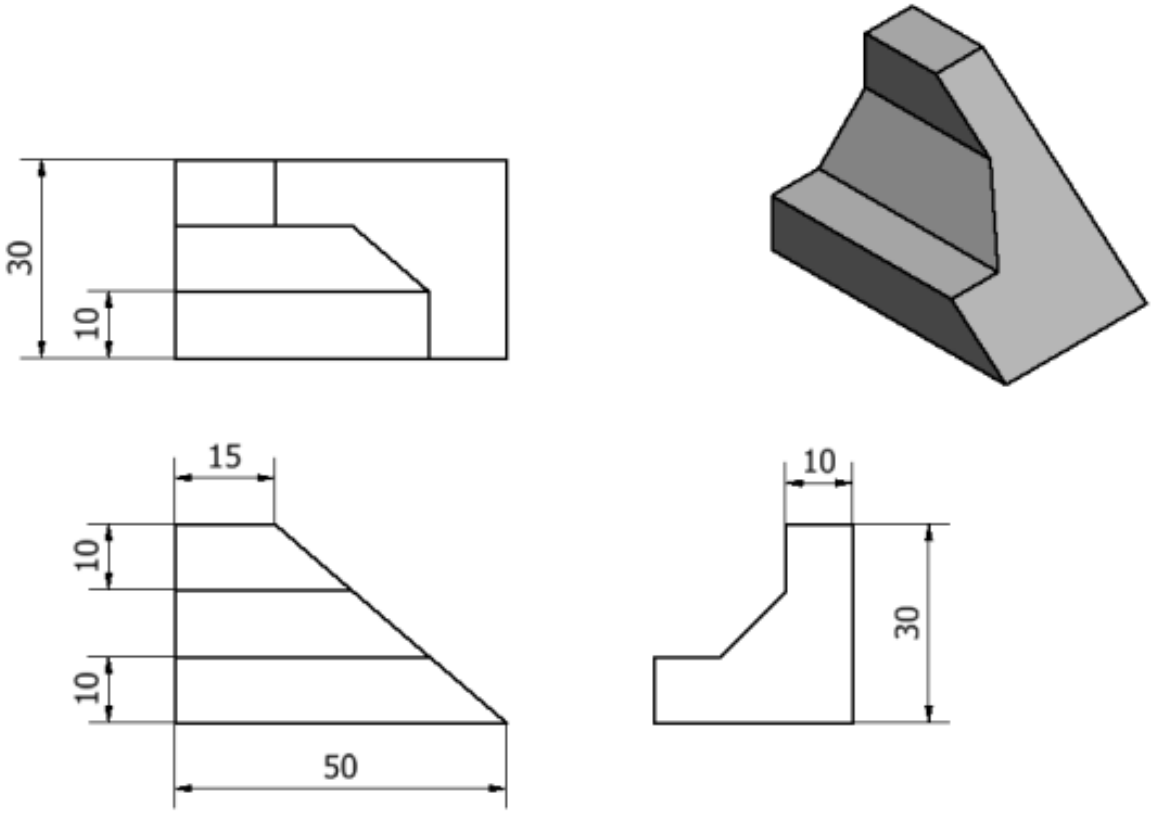

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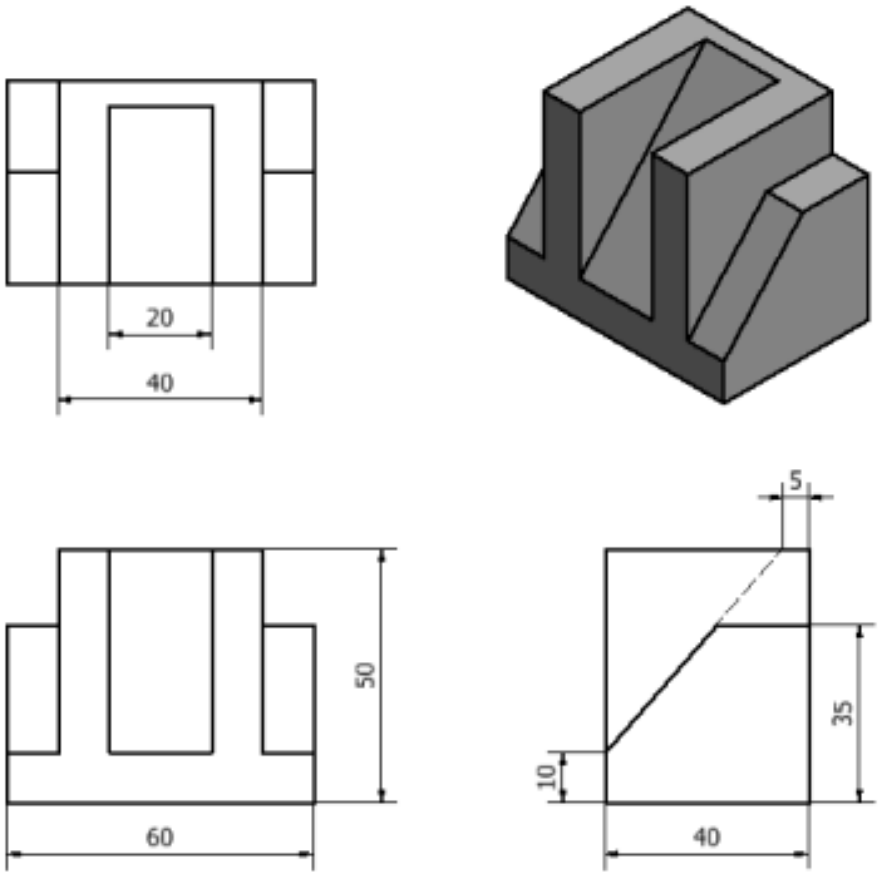

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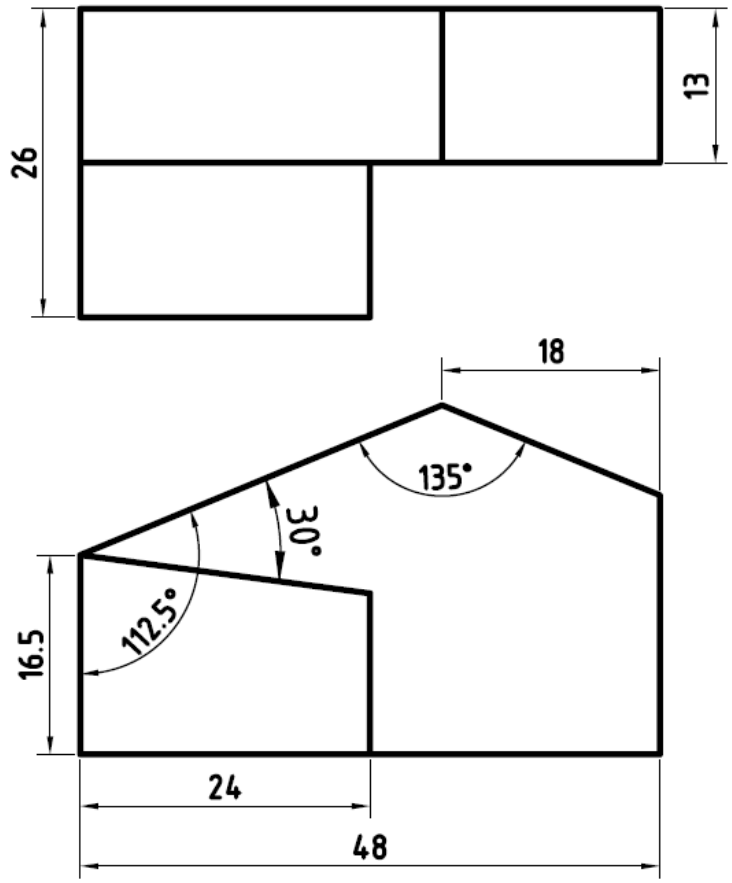

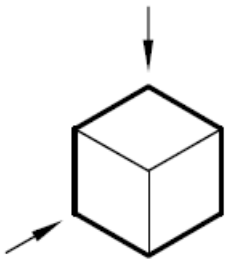

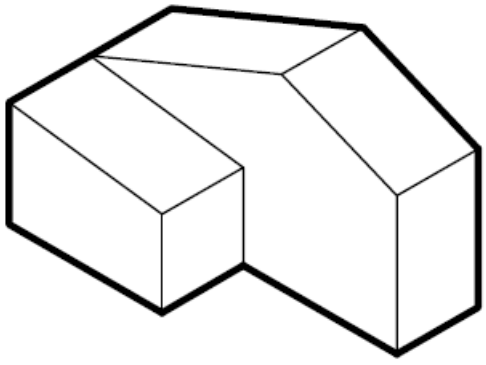

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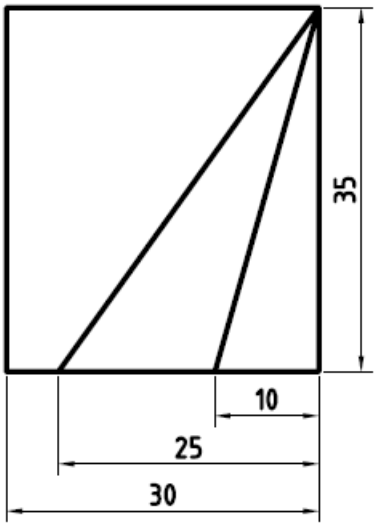

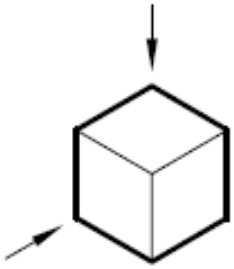

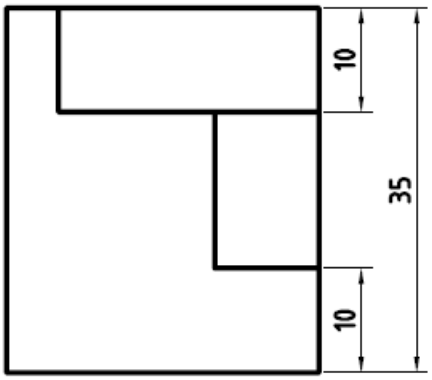

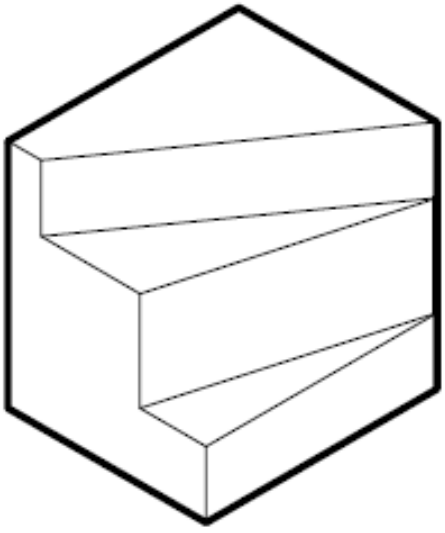

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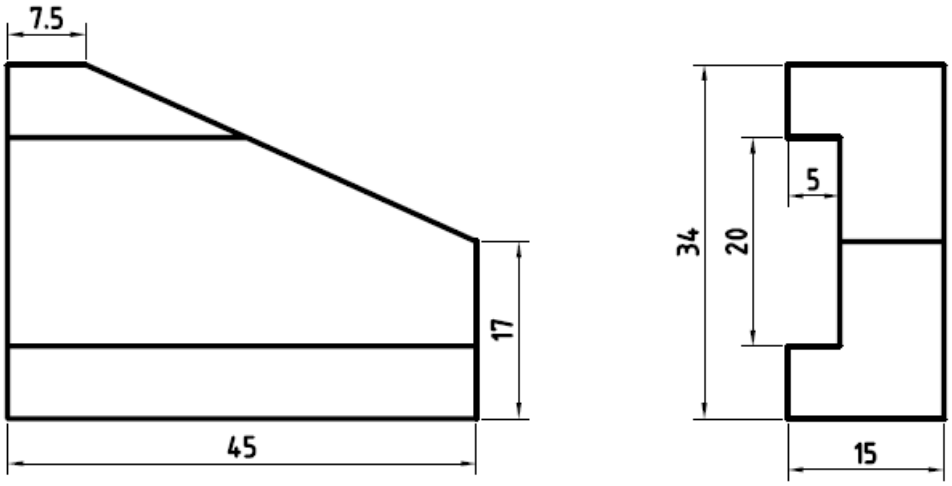

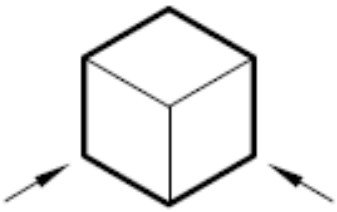

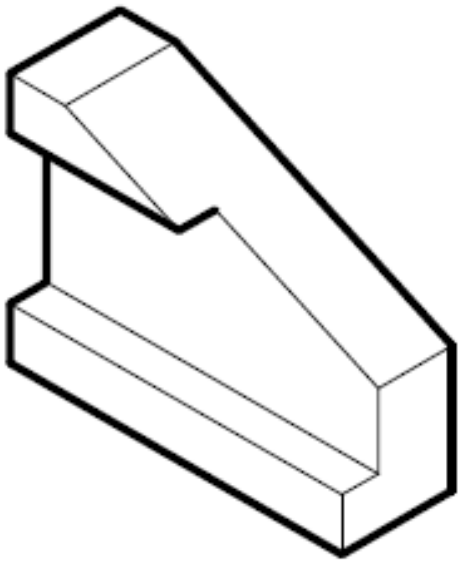

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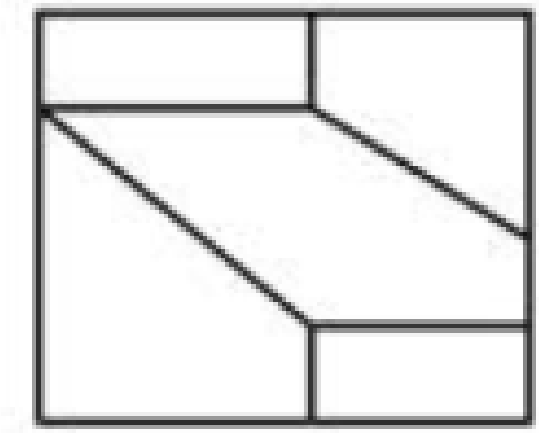
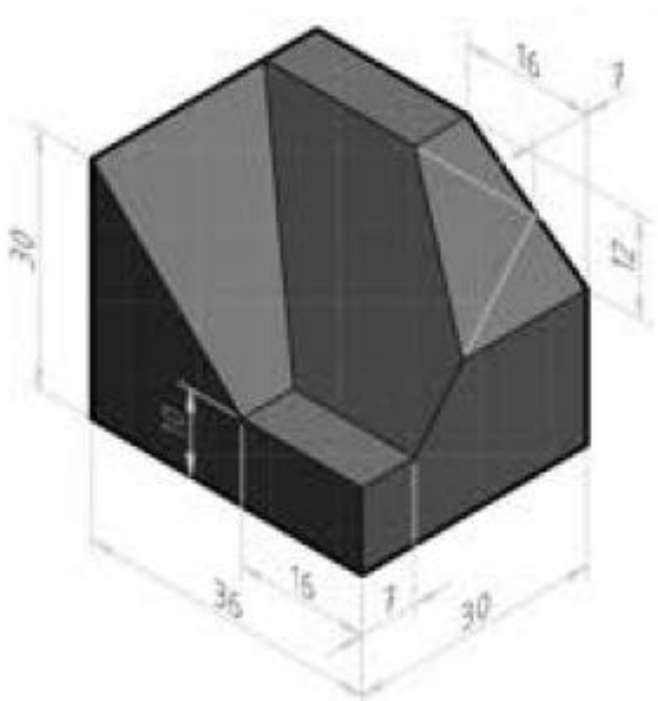
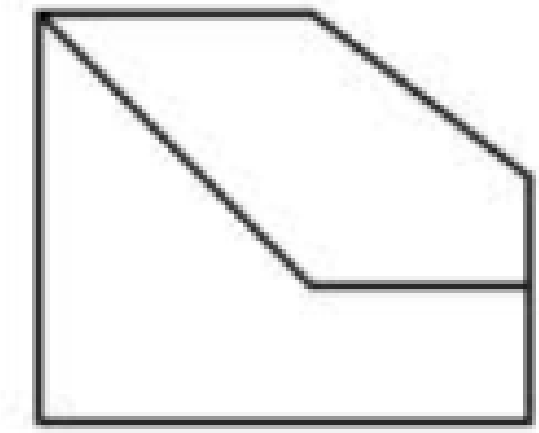
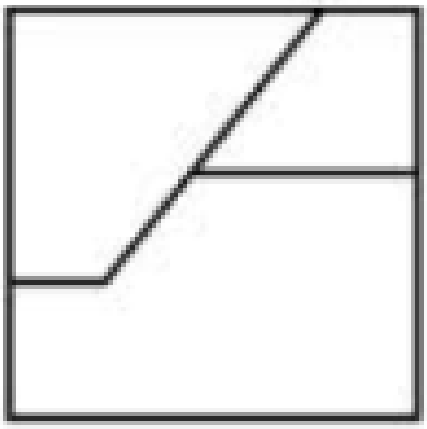








共用草圖

草圖完成後，

先擠出底部平板

點選草圖 1，

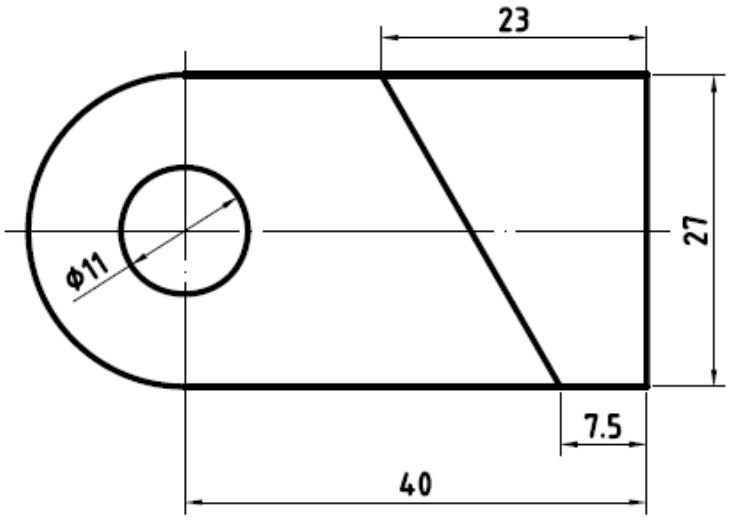
指定「共用草圖」

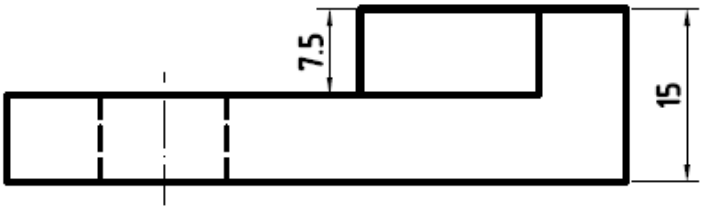
再執行擠出

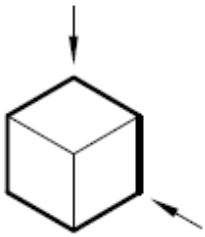
點選梯形內封閉

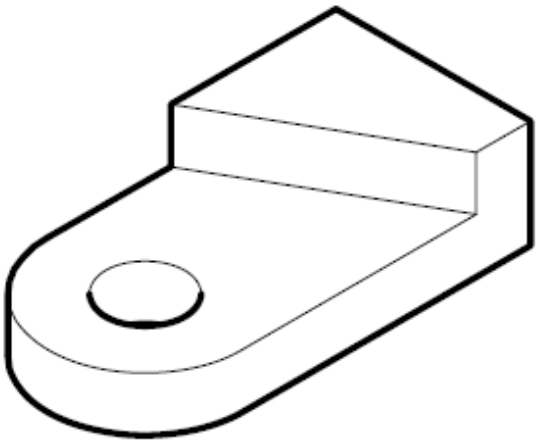
區間，

擠出 15

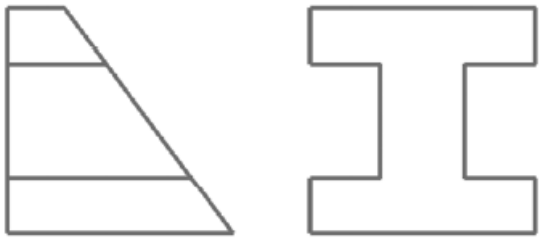


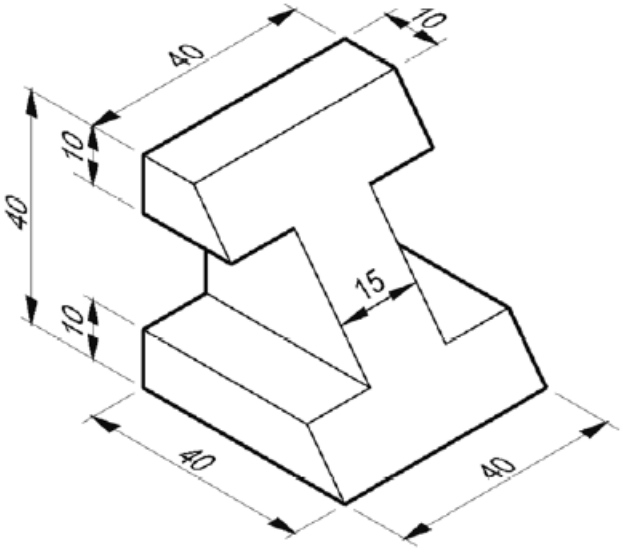




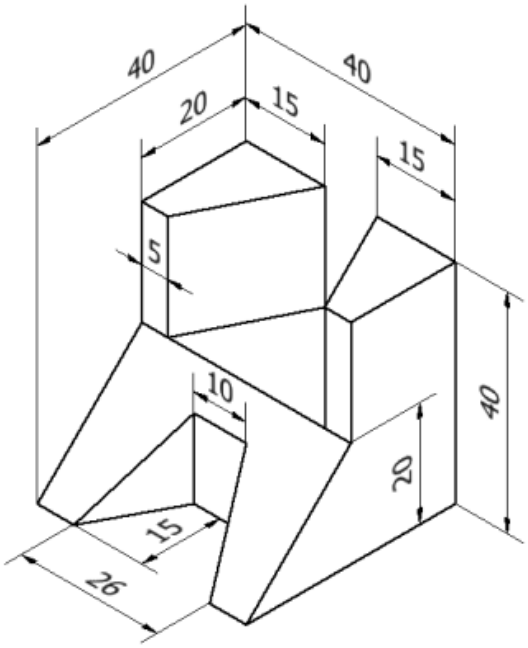


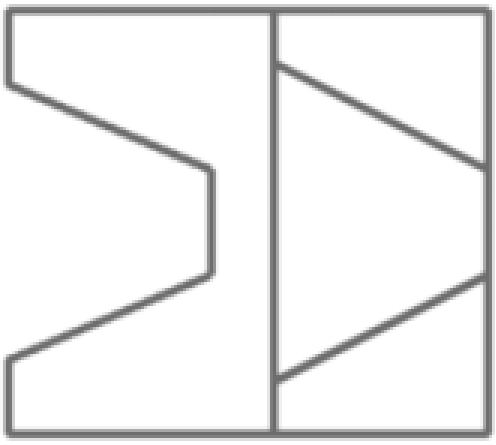
零件 1-18

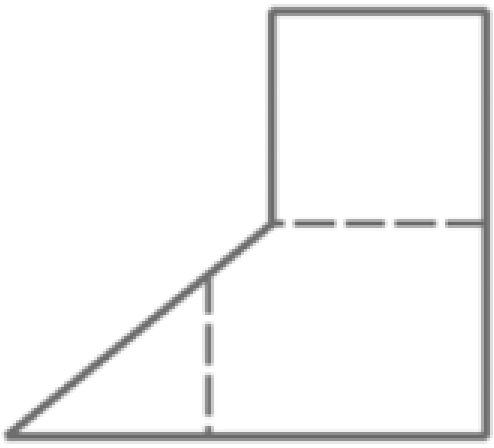




零件 1-19

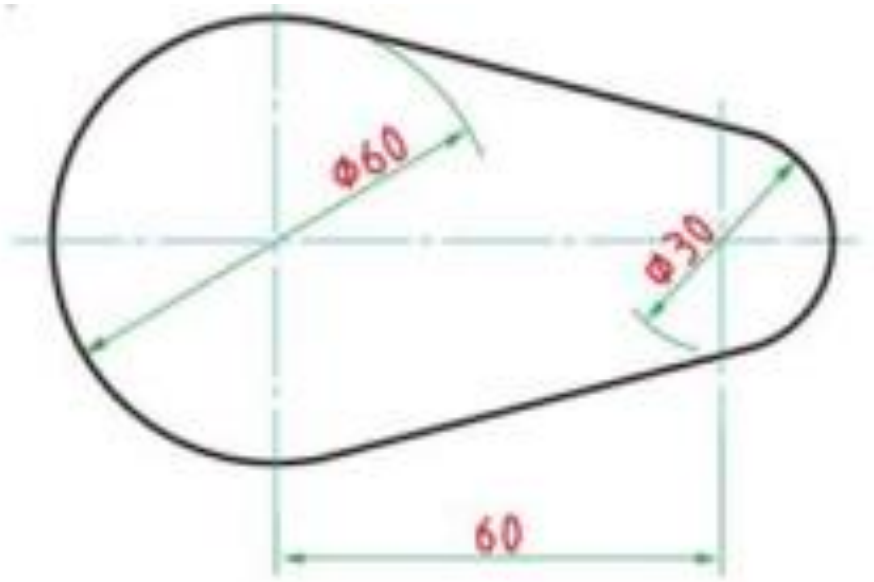




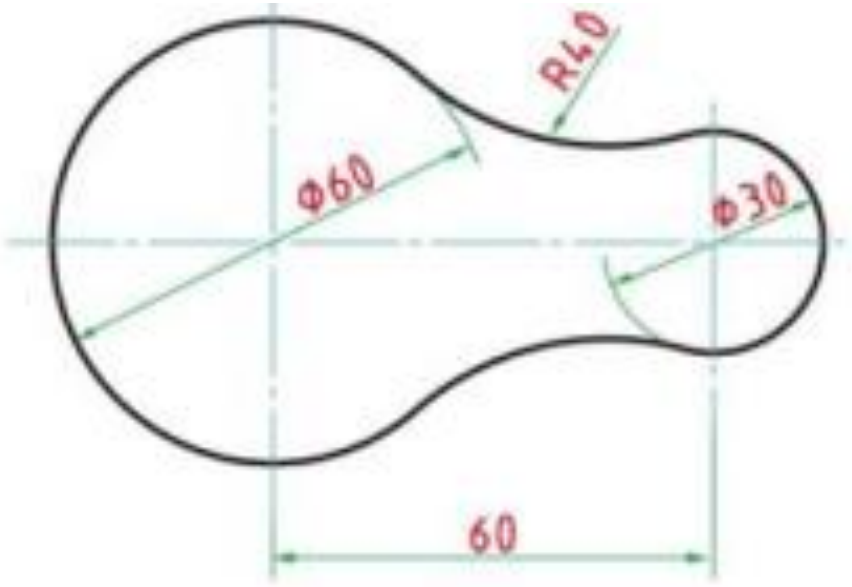


綜合練習（各圖形，厚度設為 10mm）

練習 1-1

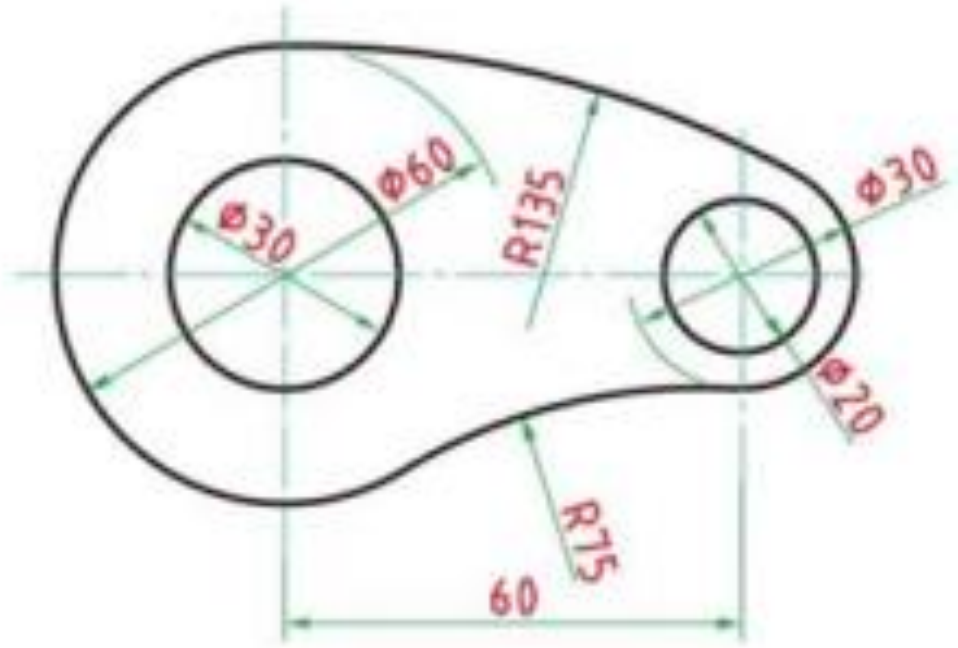


練習 1-2

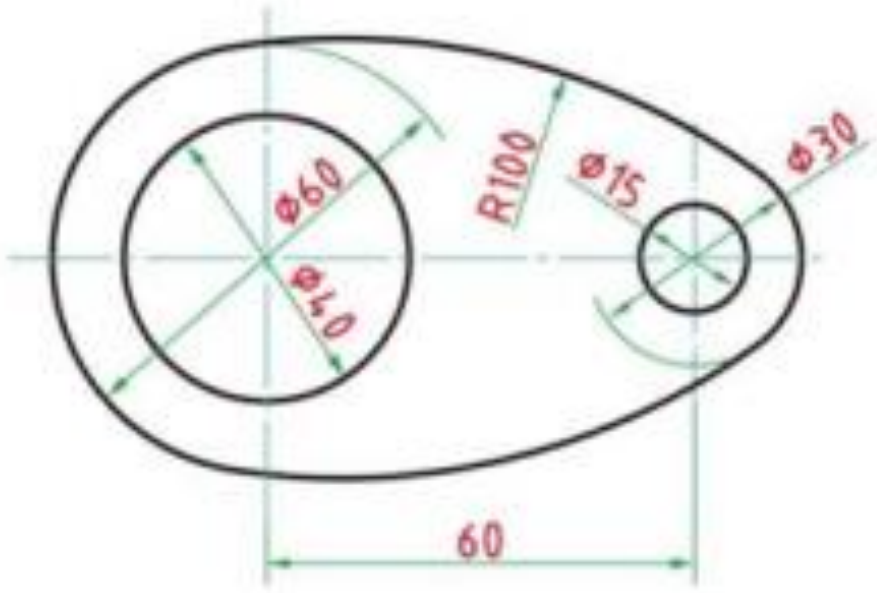


綜合練習（各圖形，厚度設為 10mm）

練習 1-3

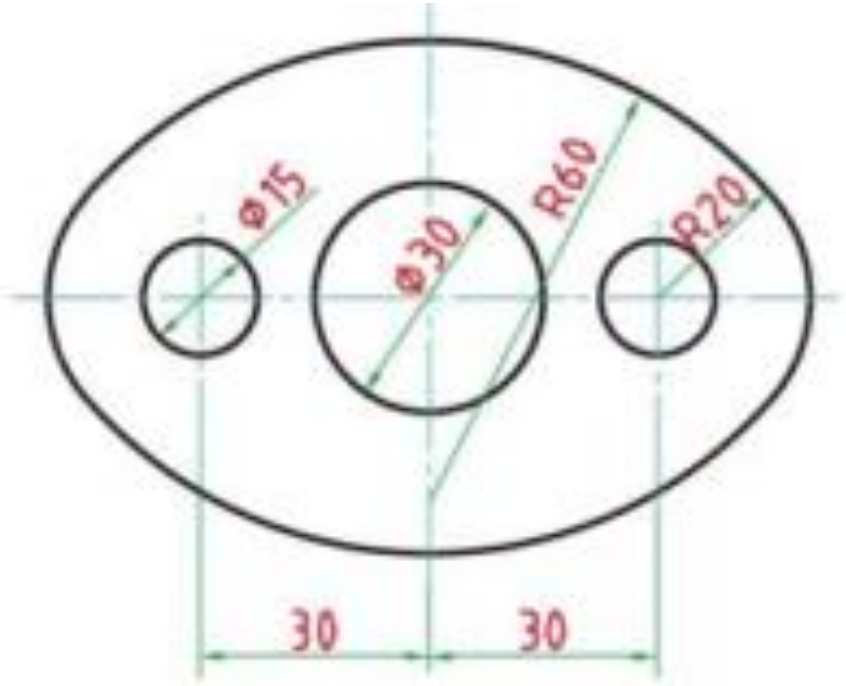


練習 1-4

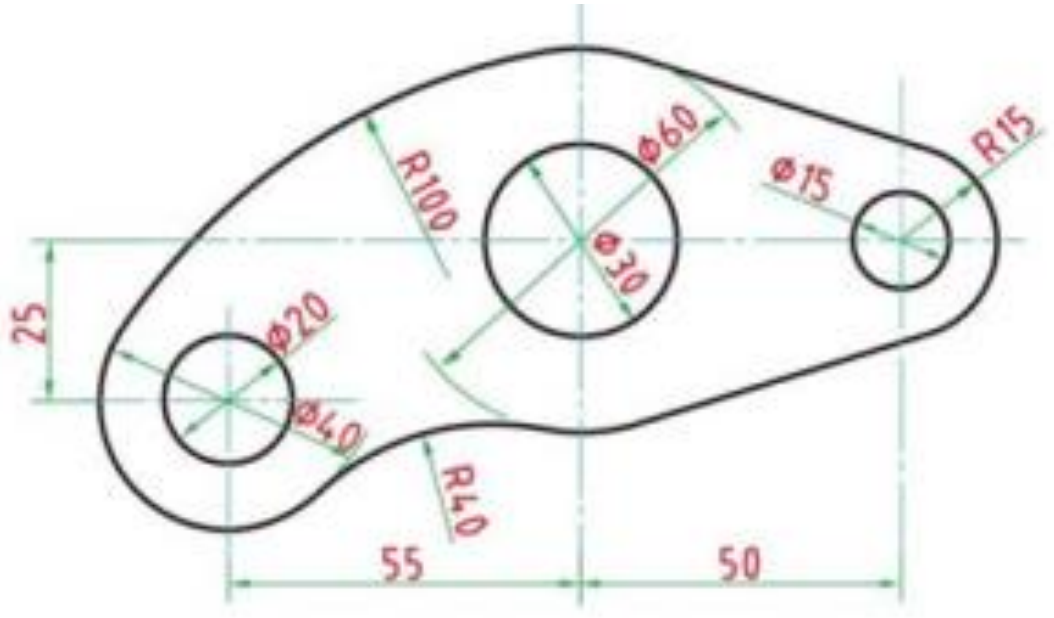


綜合練習（各圖形，厚度設為 10mm）

練習 1-5

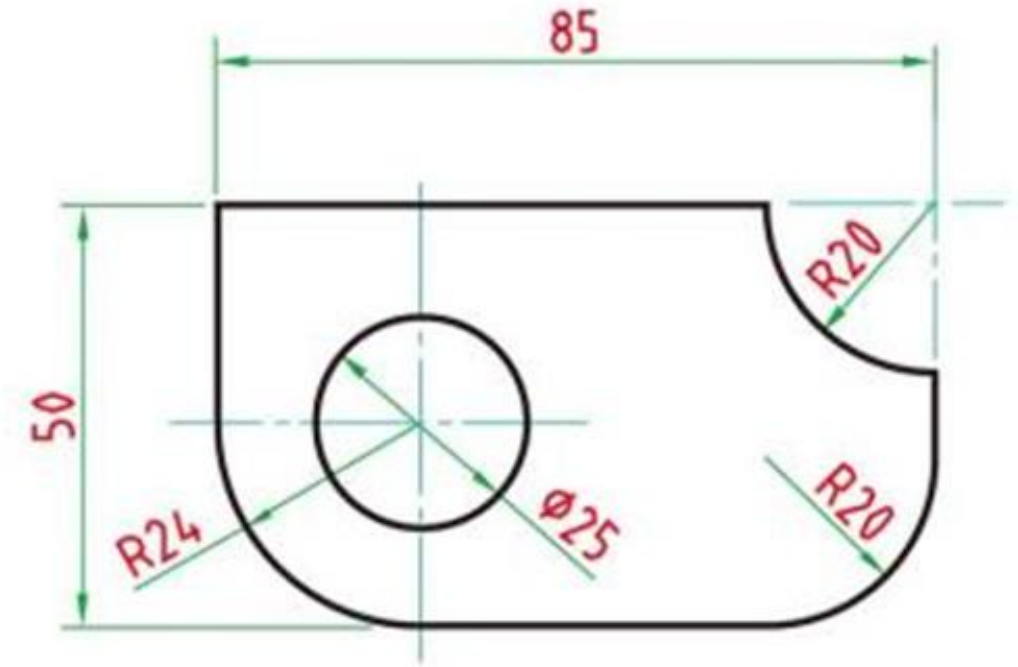


練習 1-6



綜合練習（各圖形，厚度設為 10mm）

1-7.



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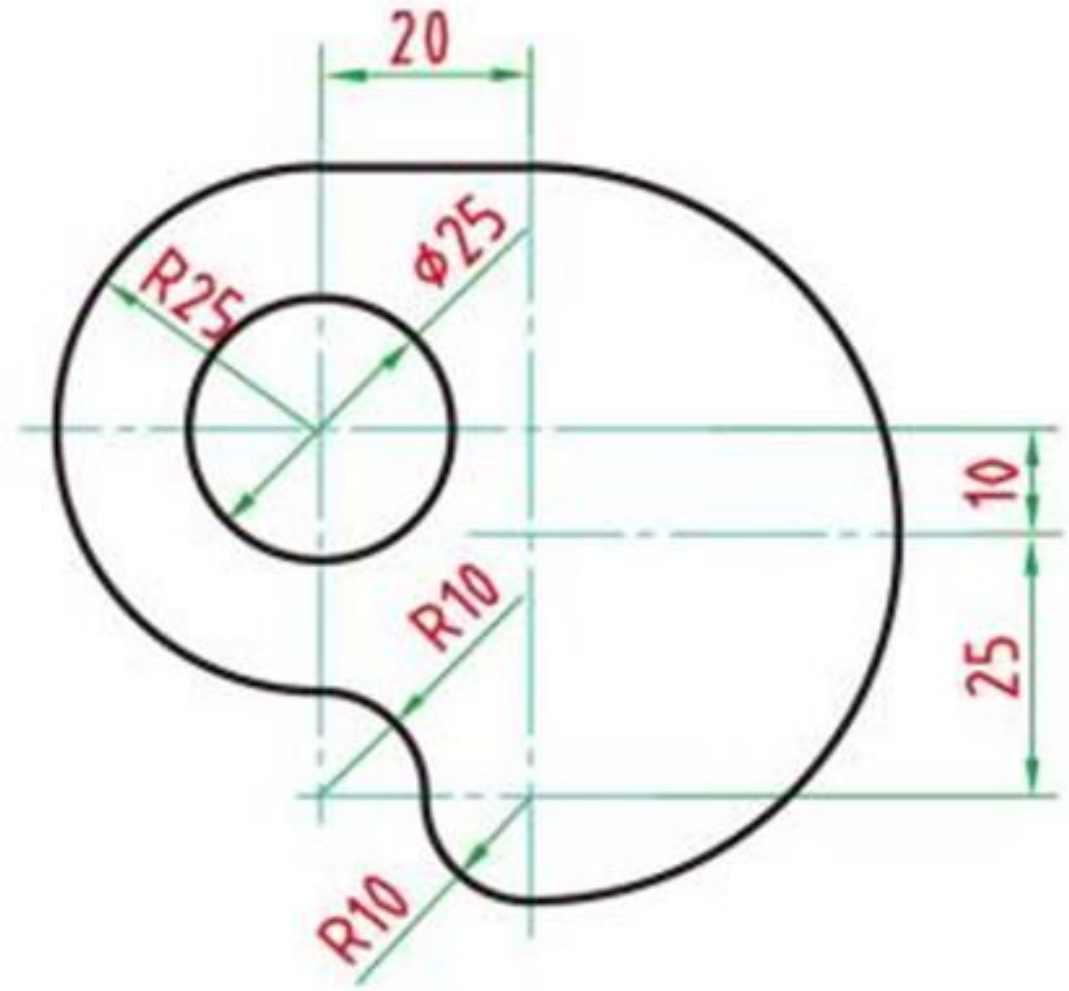
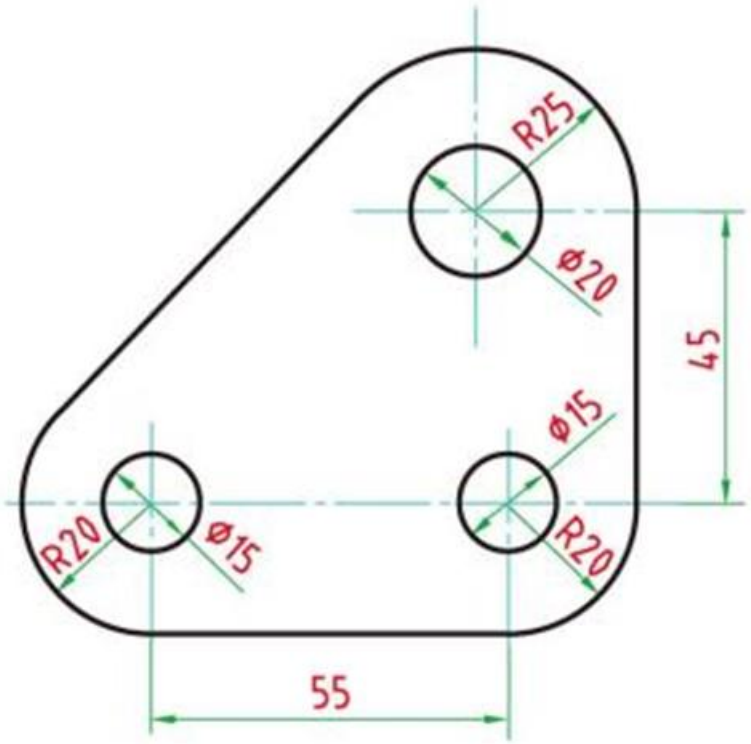


綜合練習（各圖形，厚度設為 10mm）

1-9



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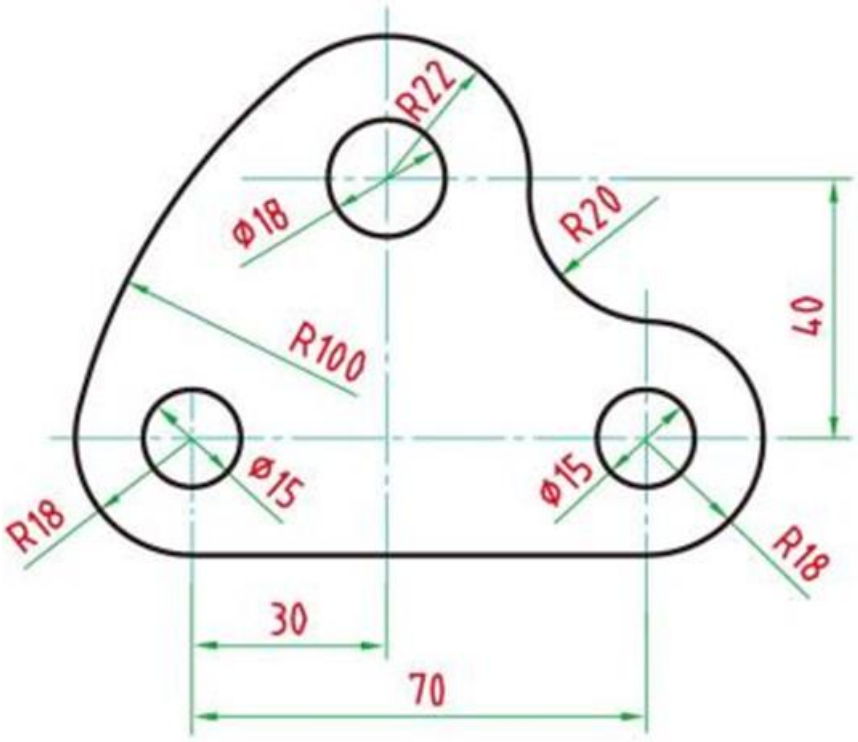
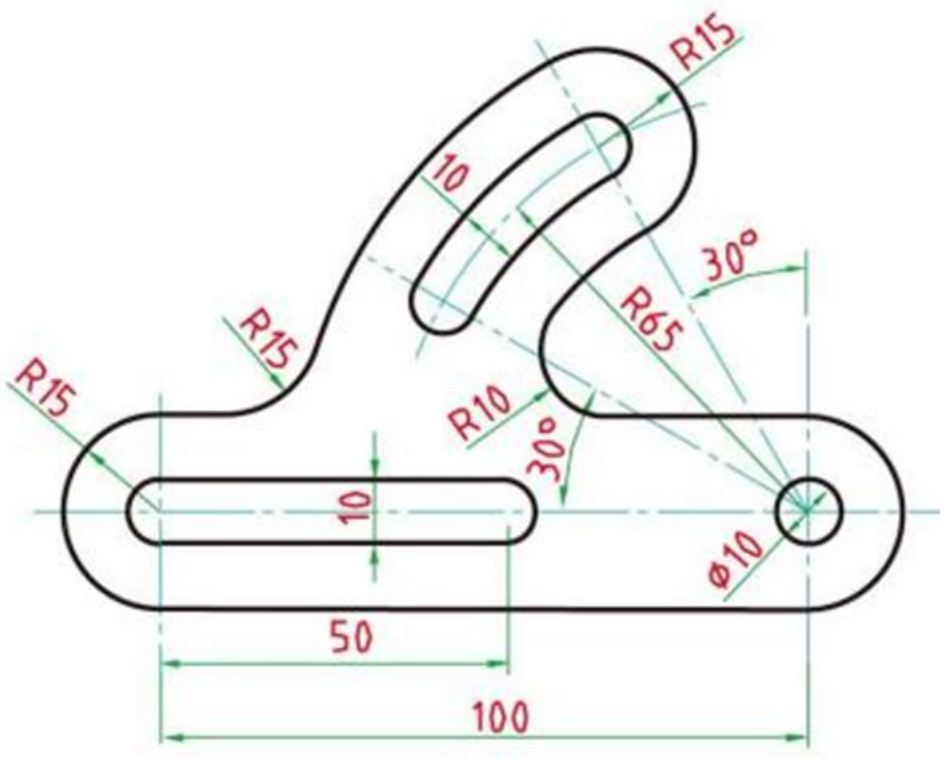


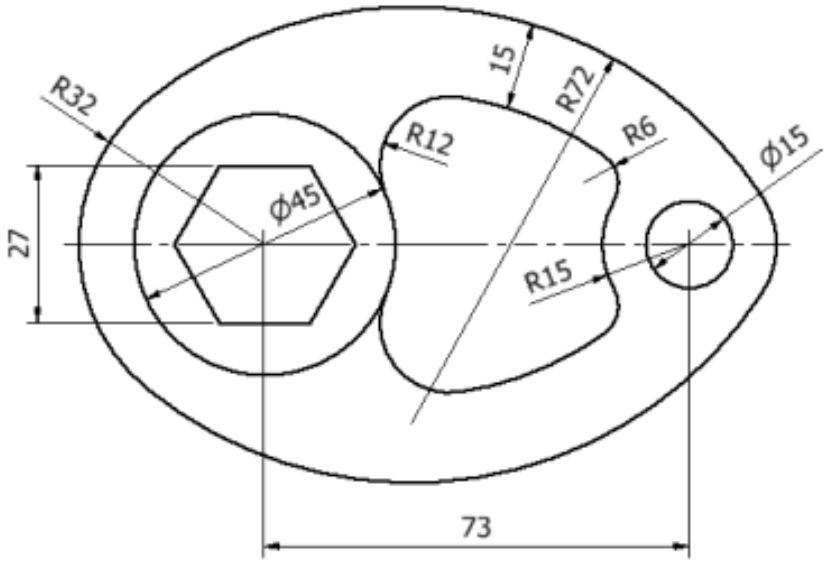
綜合練習（各圖形，厚度設為 10mm）

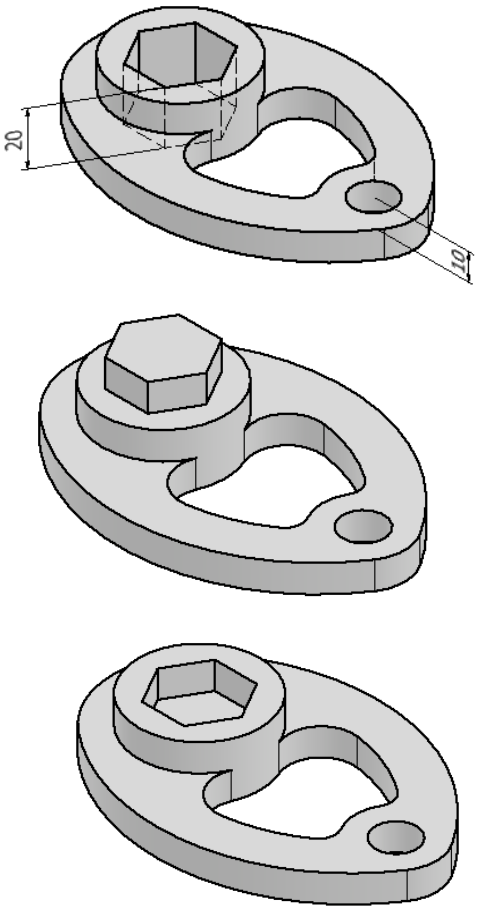
1-11



1-12

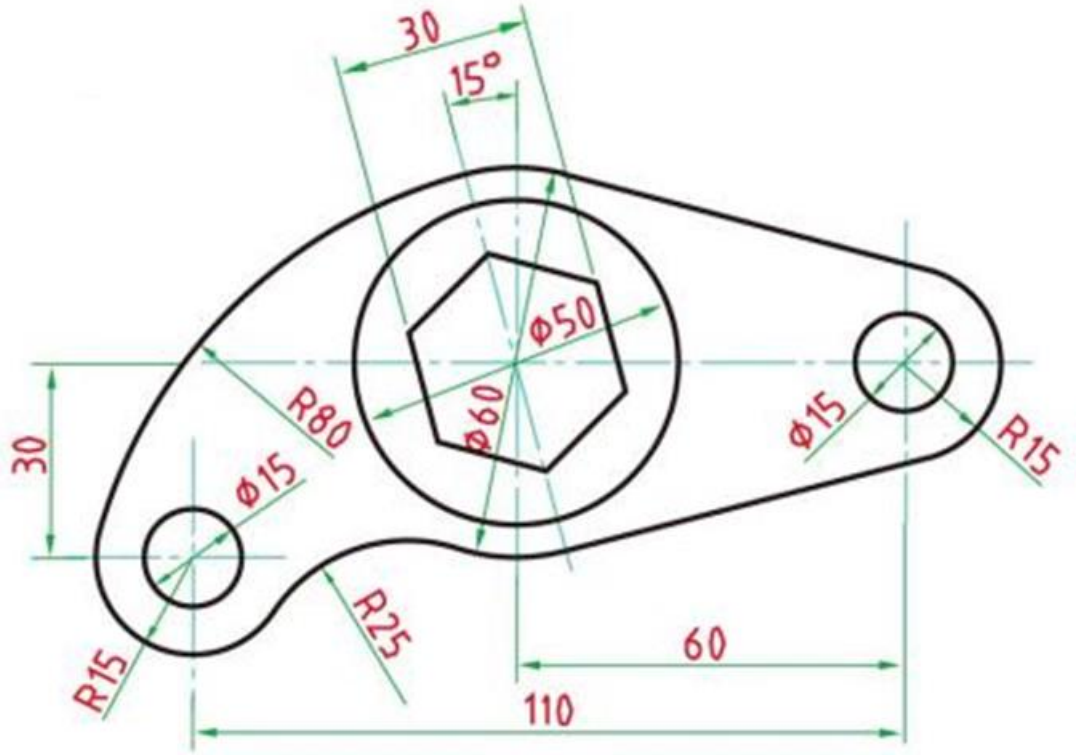
此圖利用「共用草圖」建模



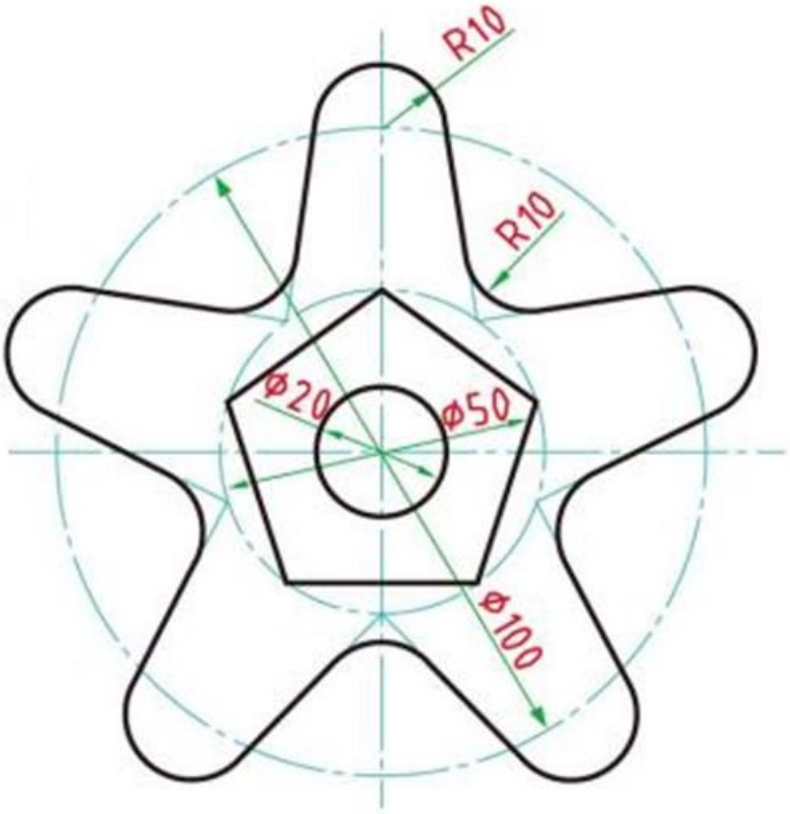


綜合練習（各圖形，厚度設為 10mm）

1-13

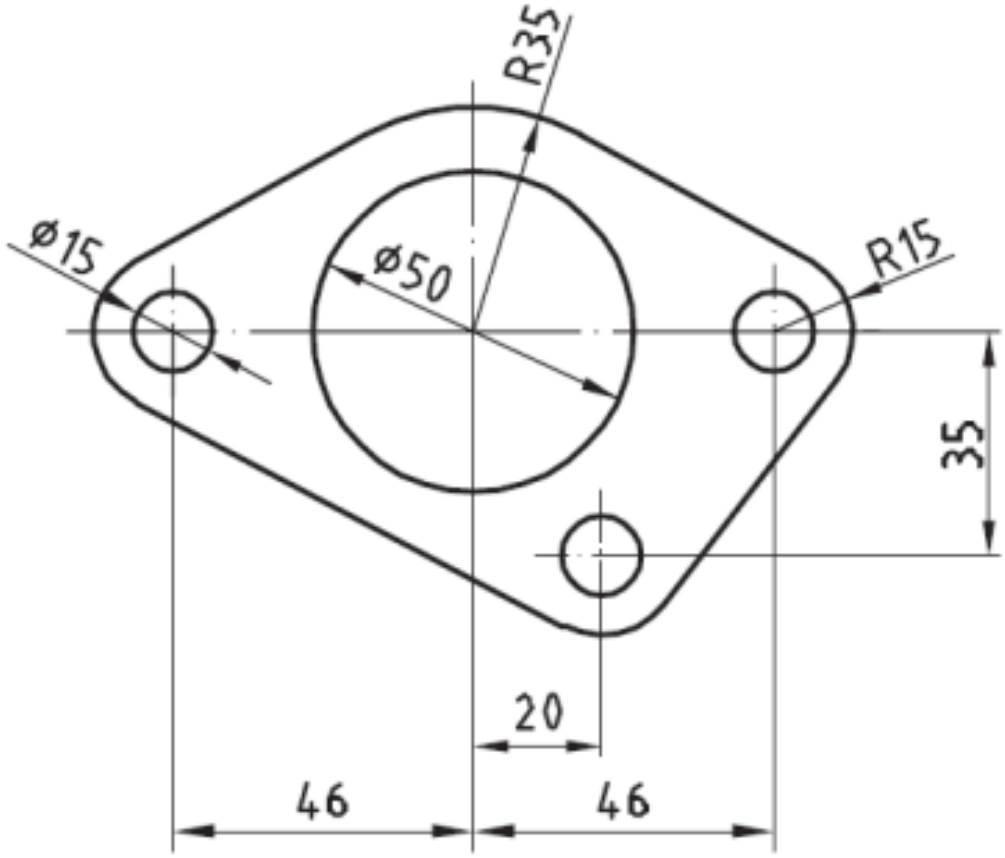


1-14



綜合練習（各圖形，厚度設為 10mm）

1-15



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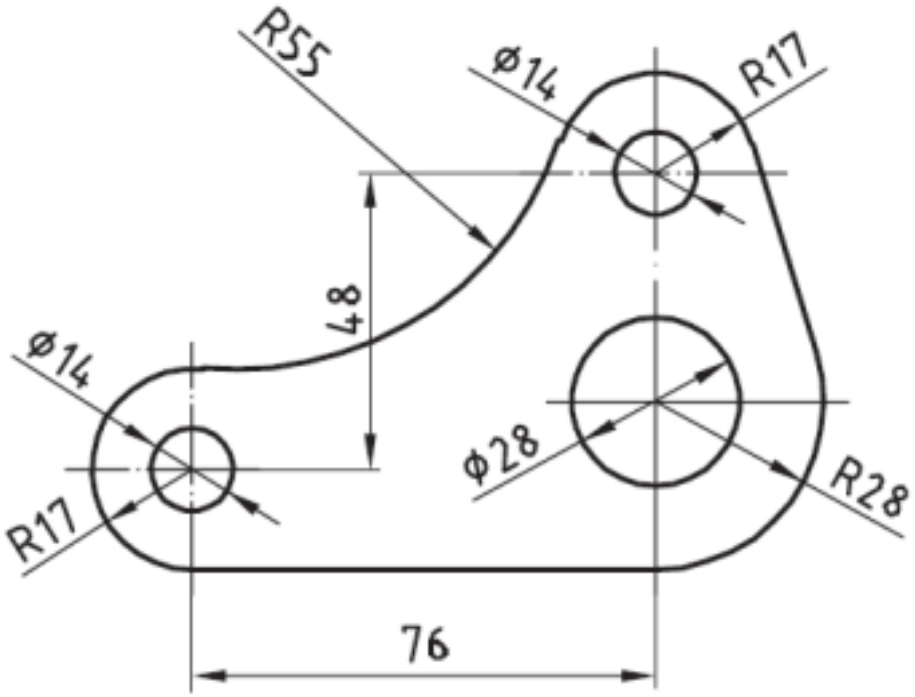
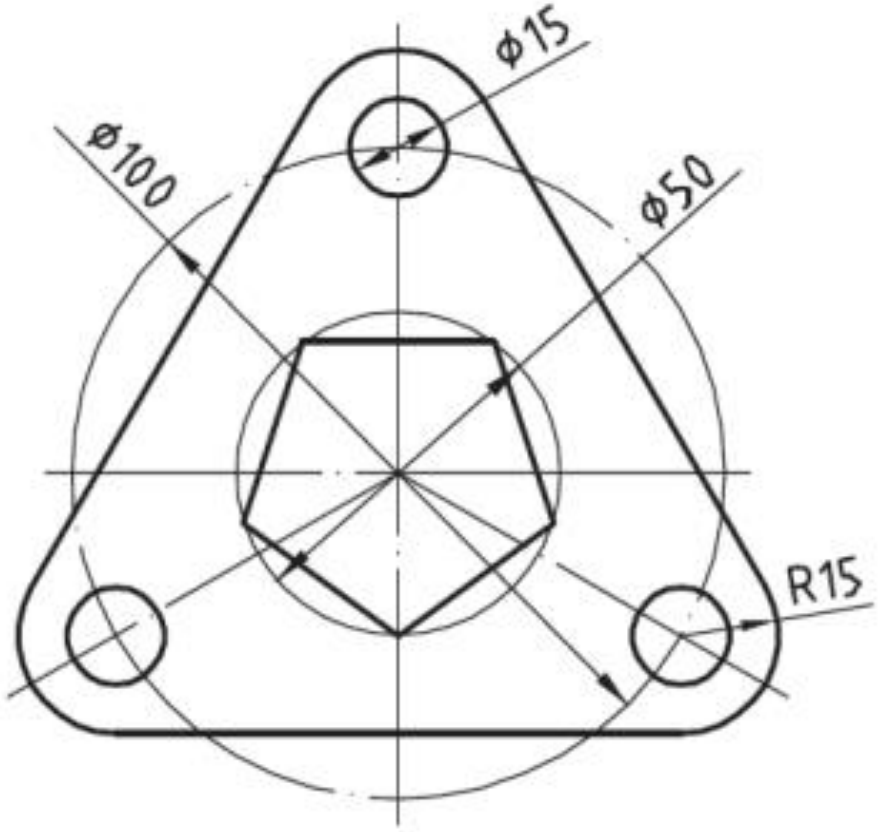
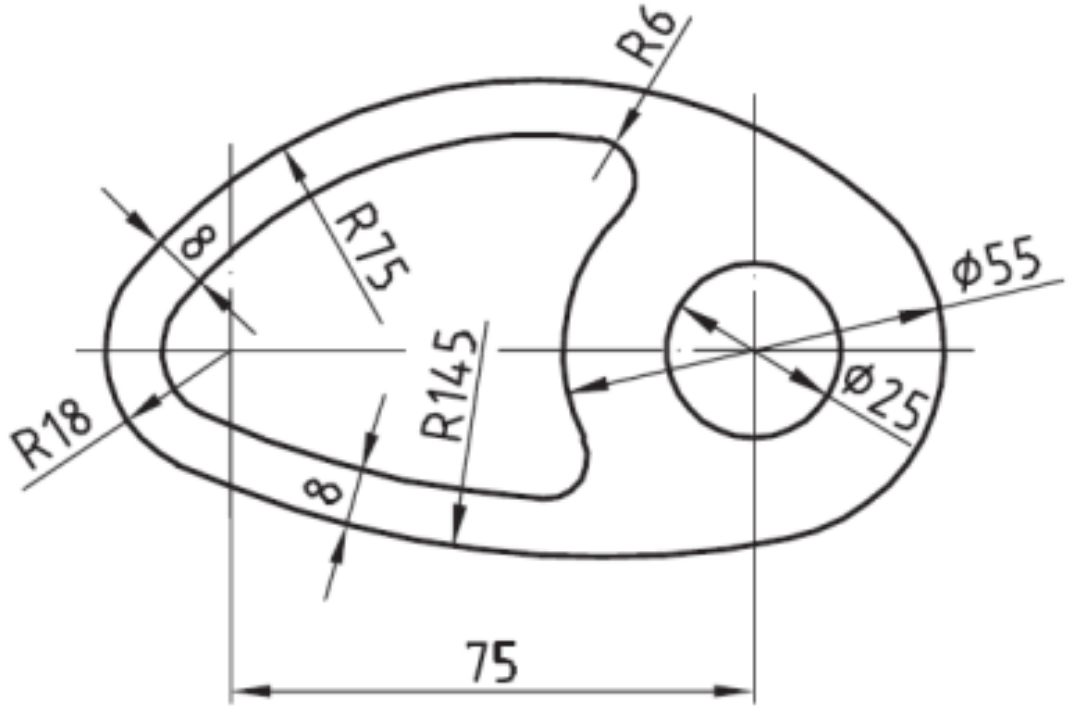


綜合練習（各圖形，厚度設為 10mm）

1-17

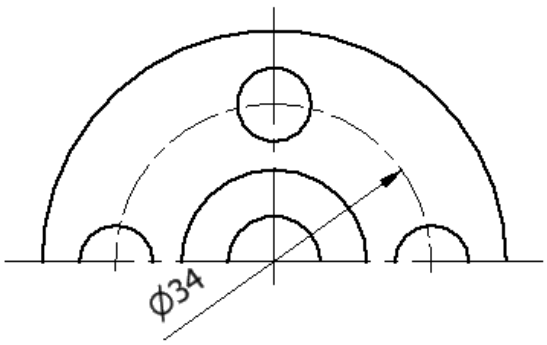


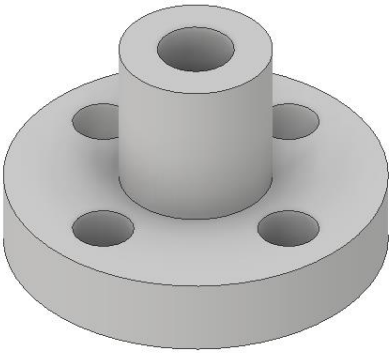
1-18



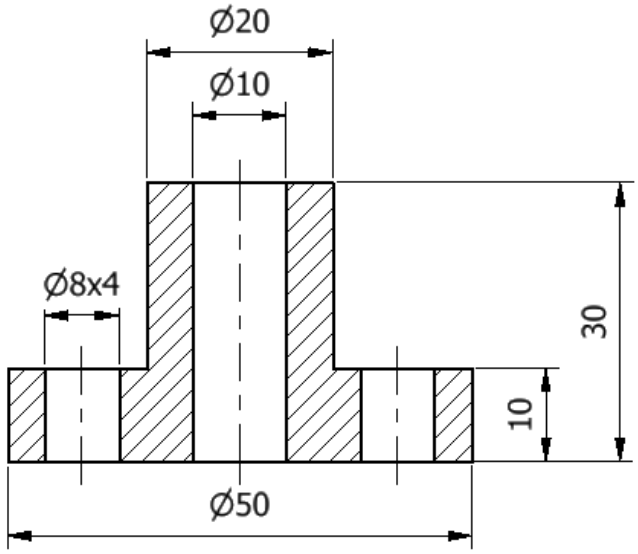
二、迴轉特徵

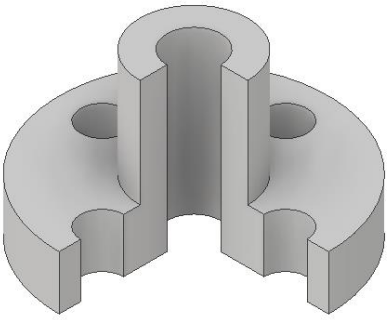
零件 2-1



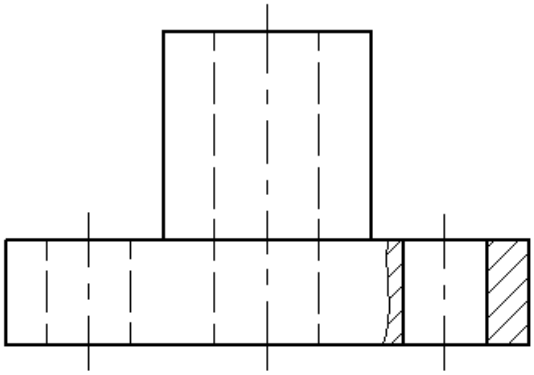


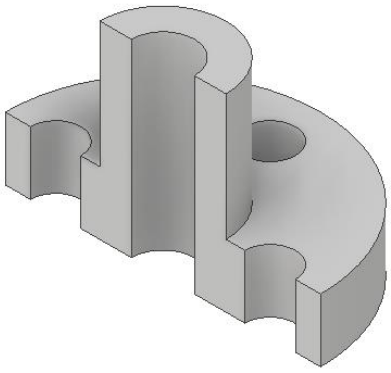
階級圓柱



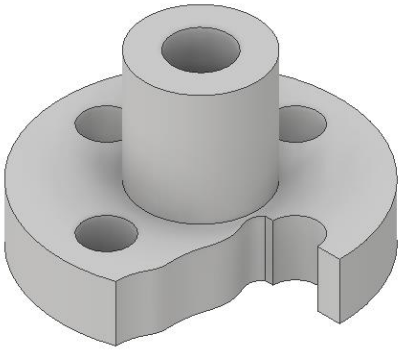


半剖面（1/4 剖面）



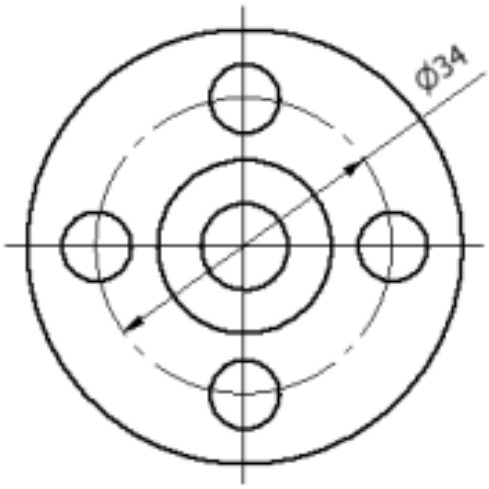


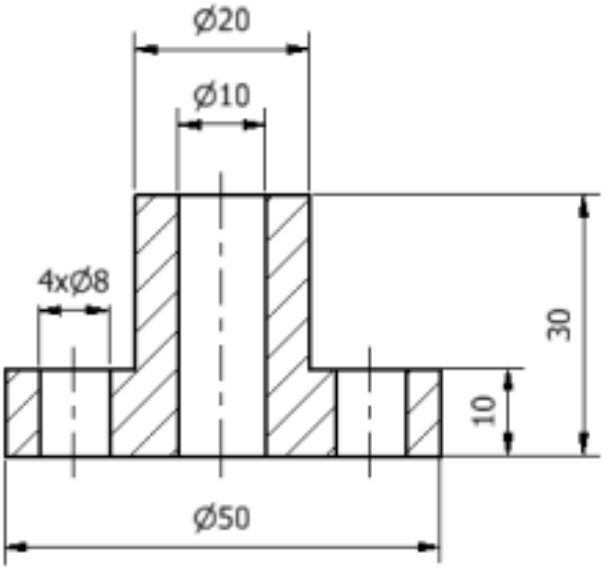
全剖面（1/2 剖面）



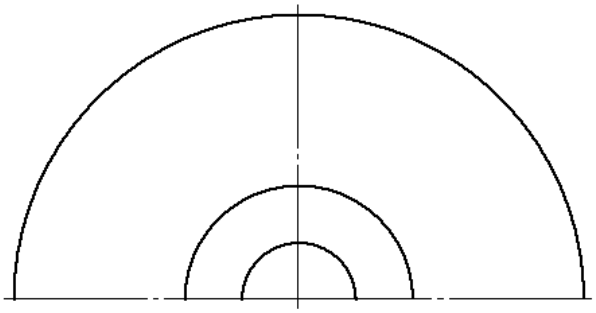
局剖剖面（剖切特定部位）

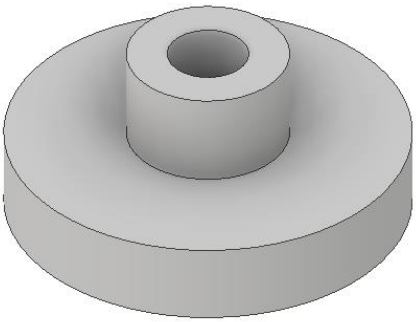
零件 2-1（另一畫法）



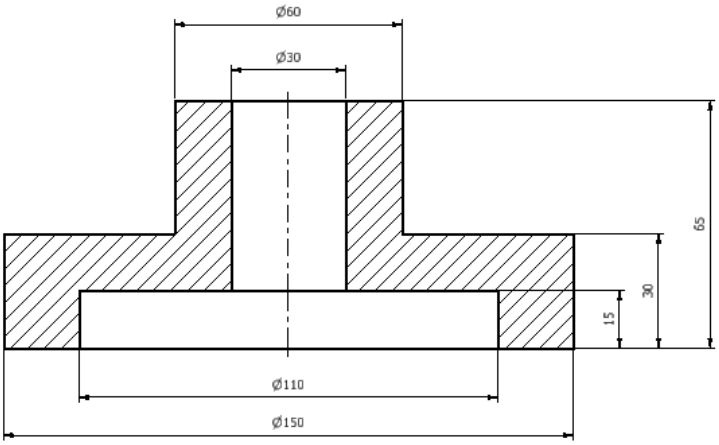


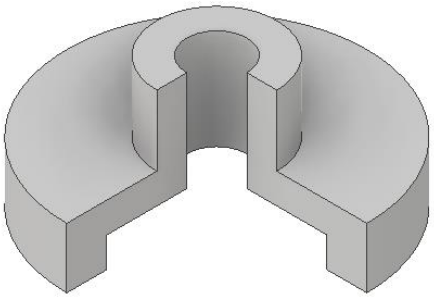
零件 2-2



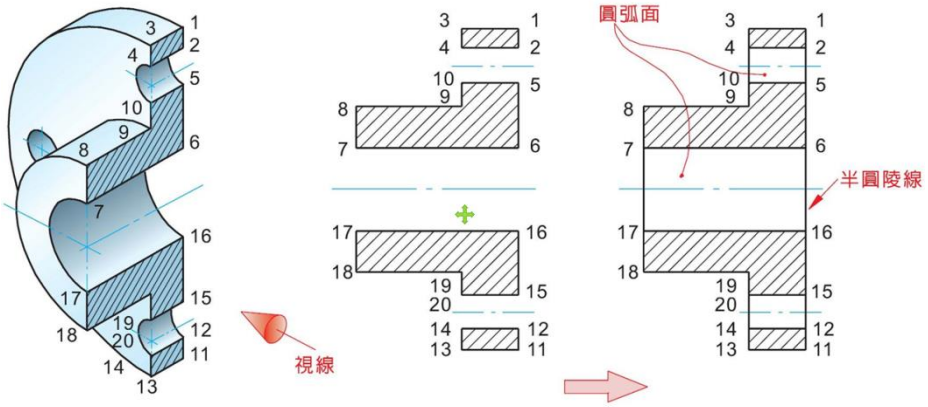


階級圓柱

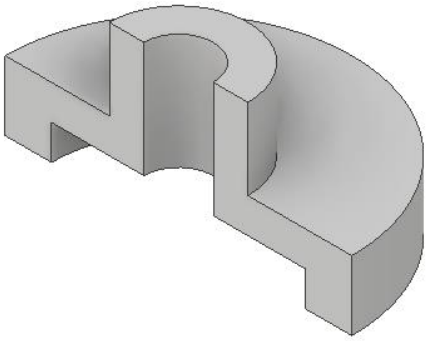




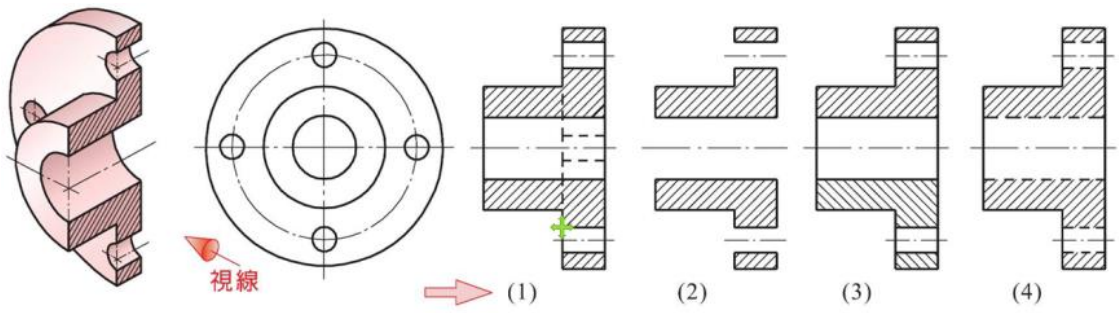
半剖面（1/4 剖面）



(a) 立體圖示　　(b) 全剖視圖之繪製

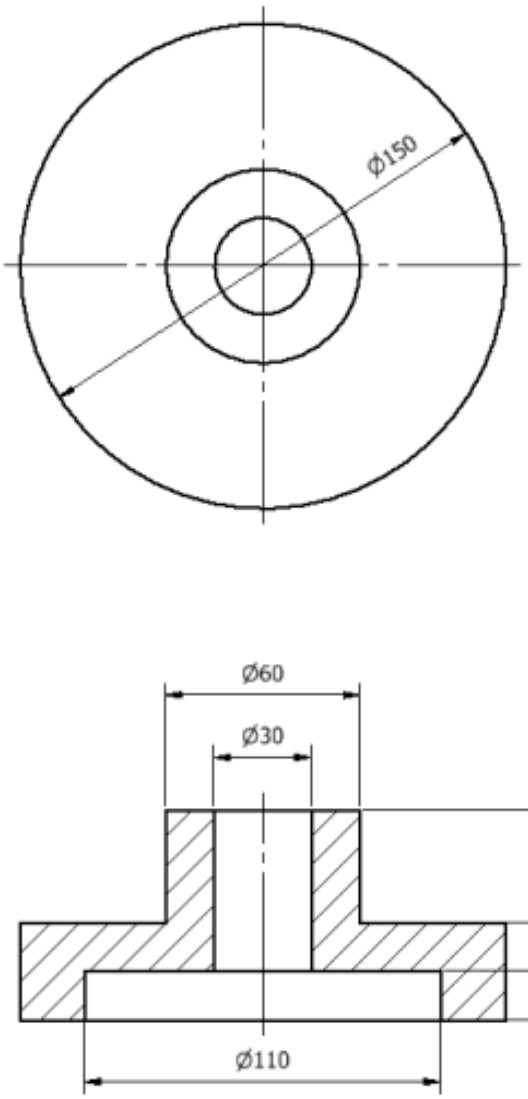


全剖面（1/2 剖面）

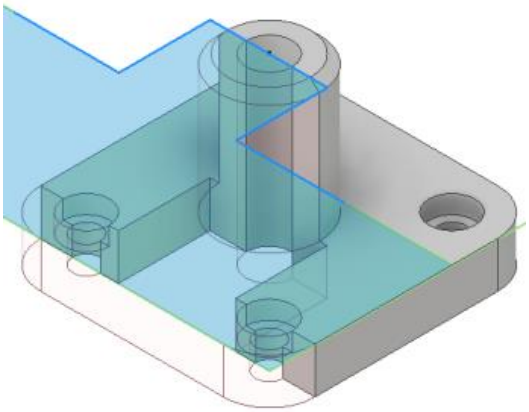


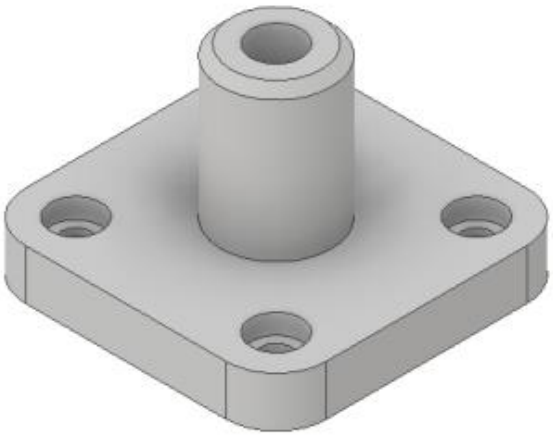
(a) 立體圖示　　(b) 前視圖　　(c) 右側全剖視圖錯誤例

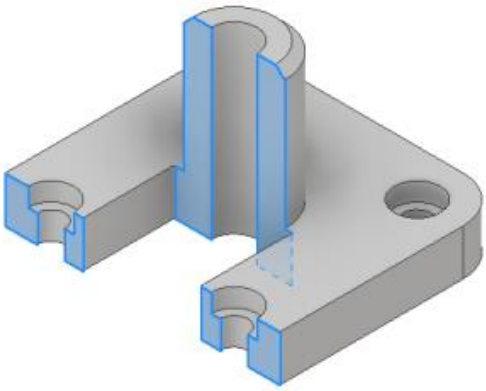
零件 2-2（另一畫法）

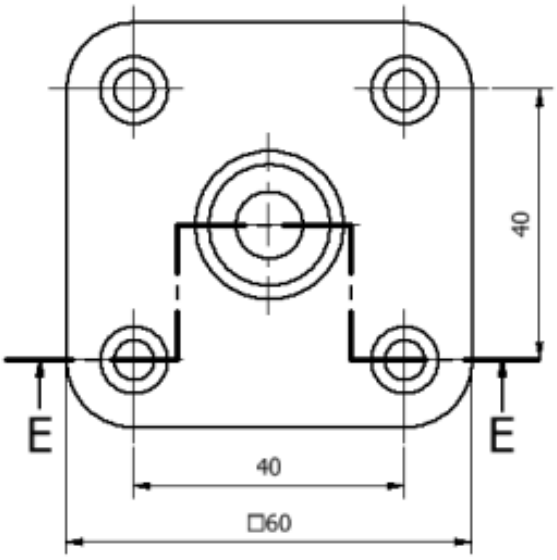


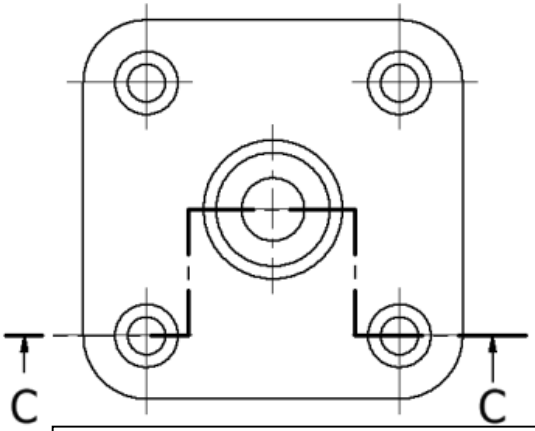
零件 2-3



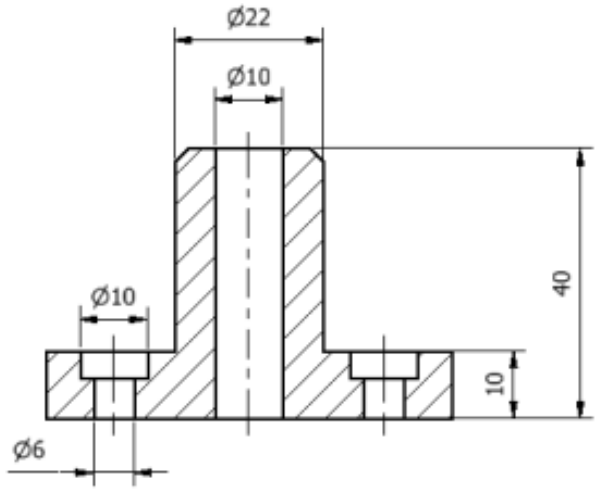






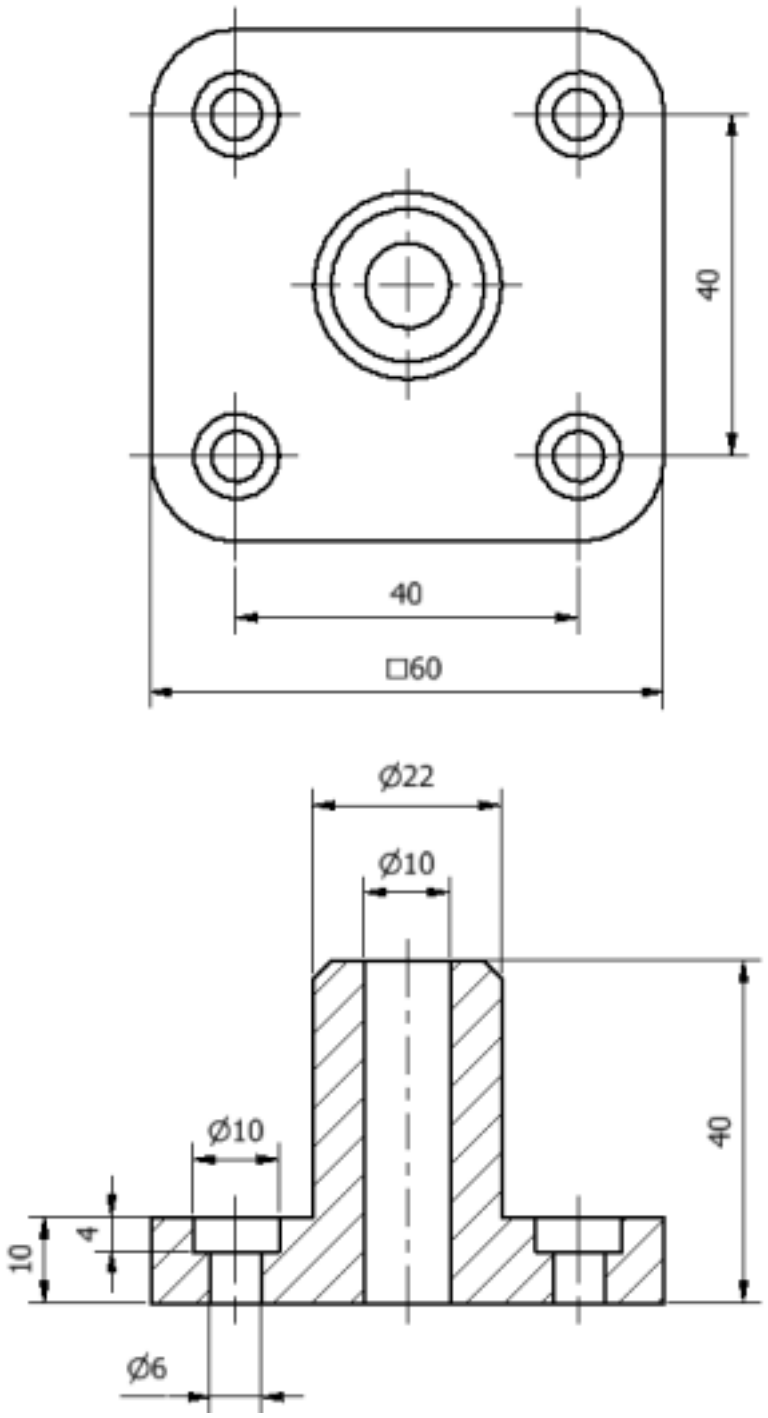


圓角 R10、去角 2x45 度、魚眼坑深度 4mm



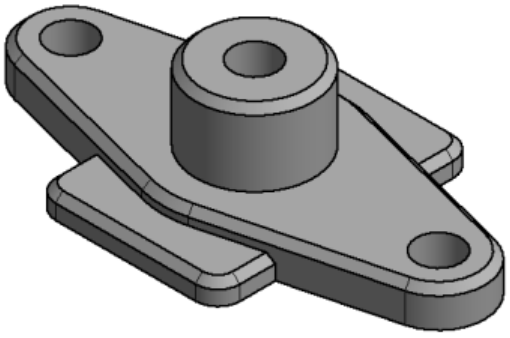
藍色線為假想切割輪廓線，不可繪出。

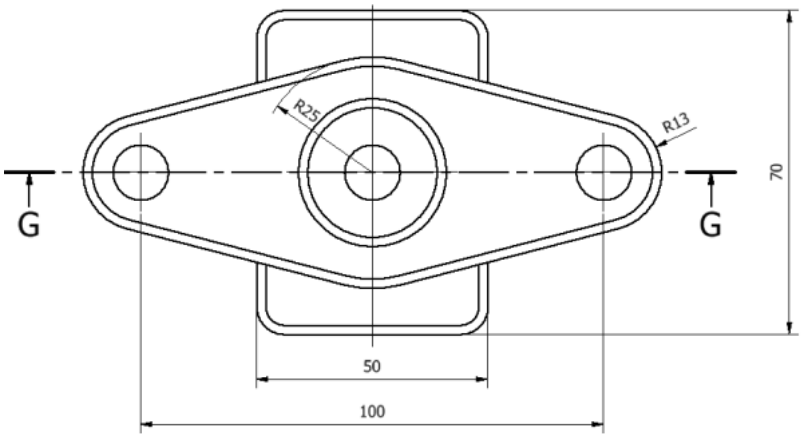
零件 2-3（參考畫法）若切割位置明確，割面線應省略。

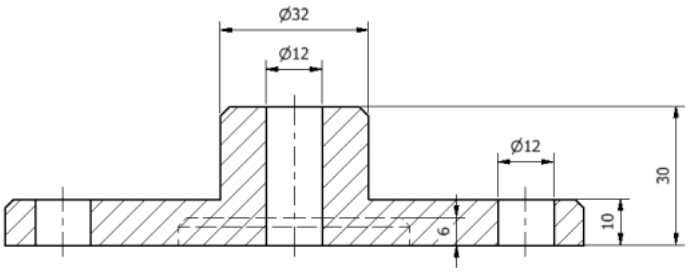


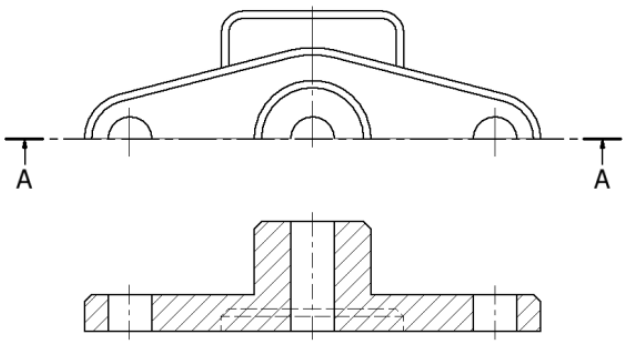
零件 2-4

註：凡未標註之去角皆為 2x45°

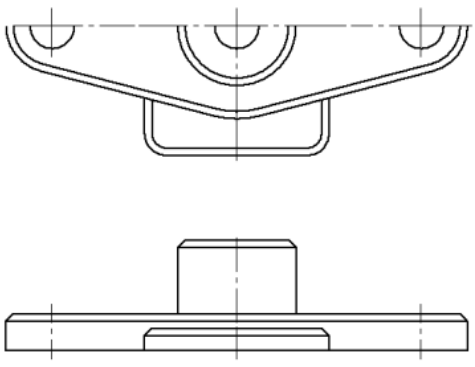






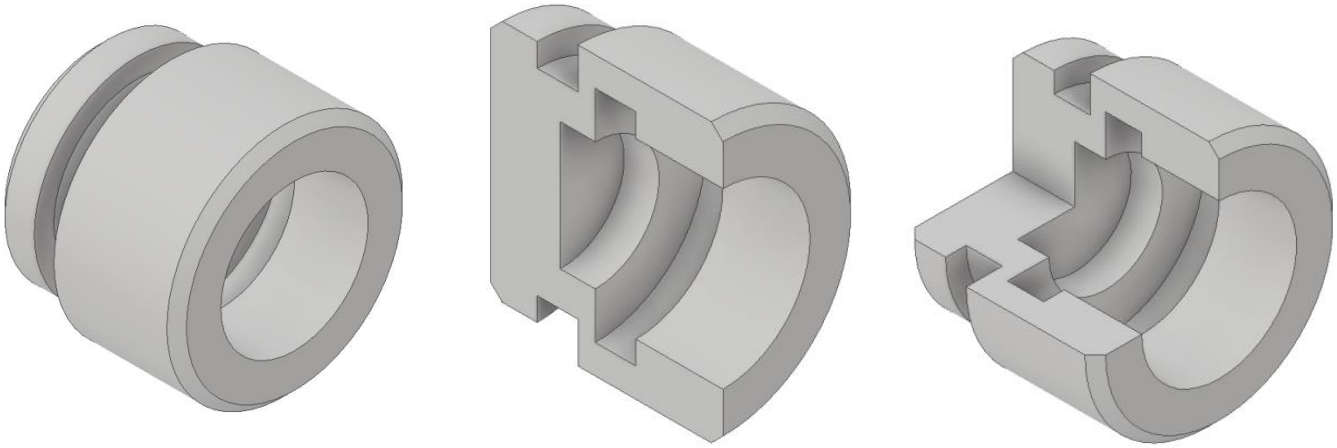


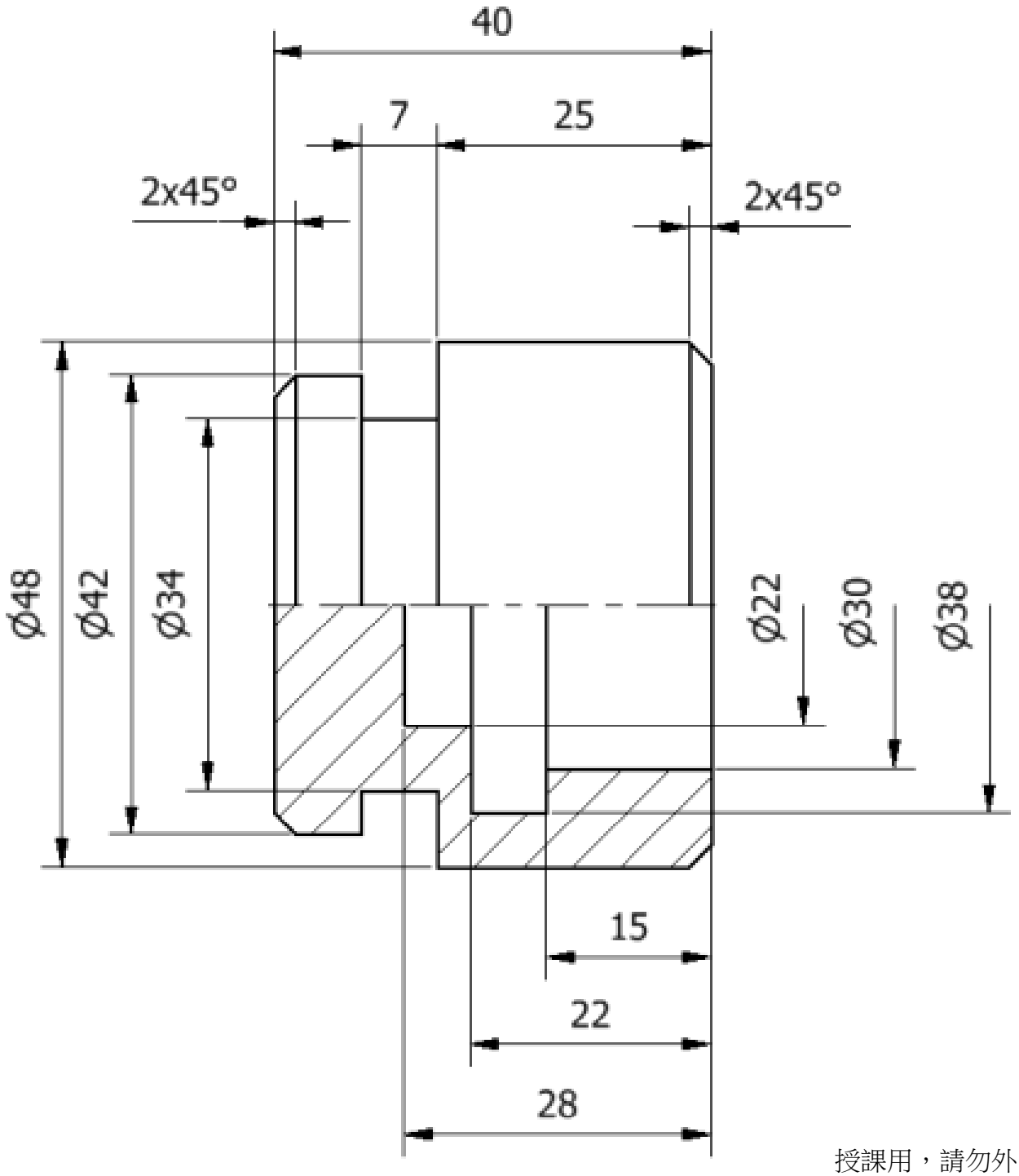
後側半視圖，主要強調剖面



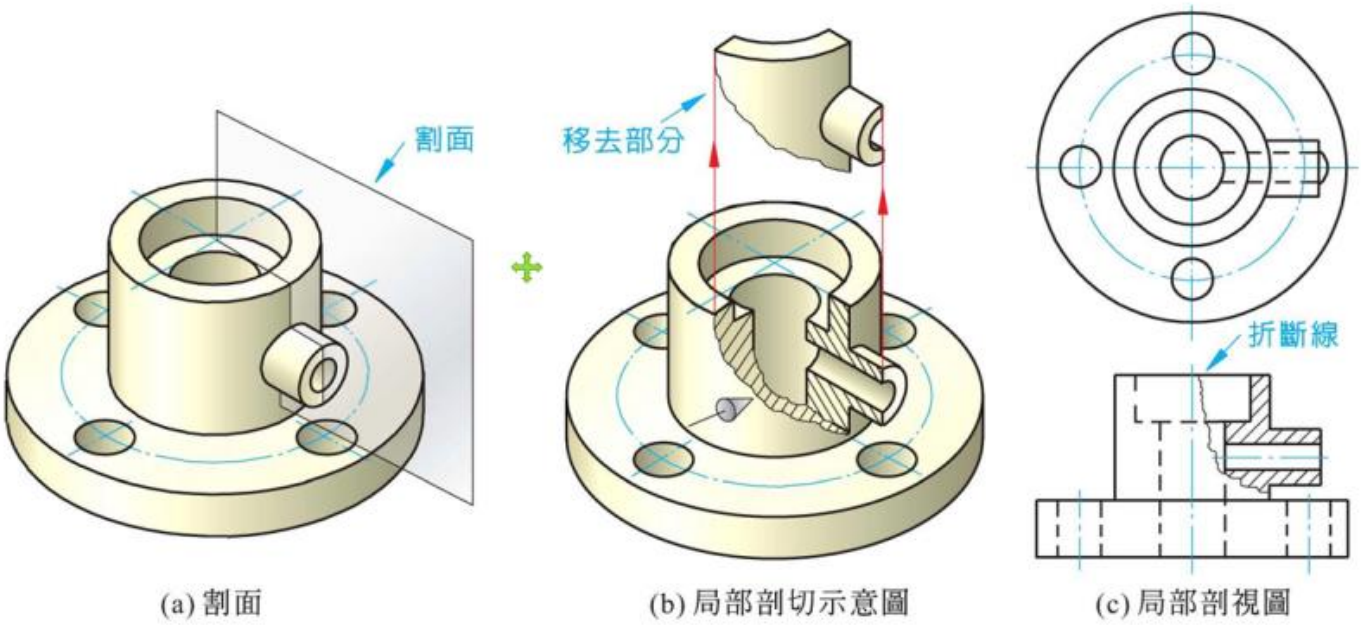
前側半視圖，主要強調重要外觀

零件 2-5

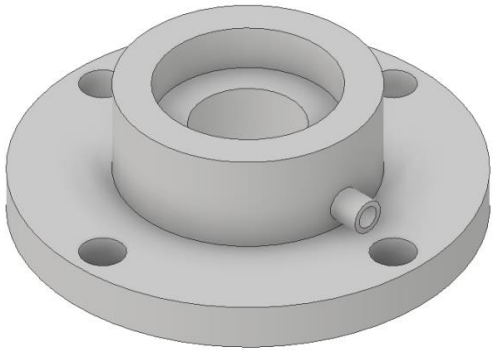


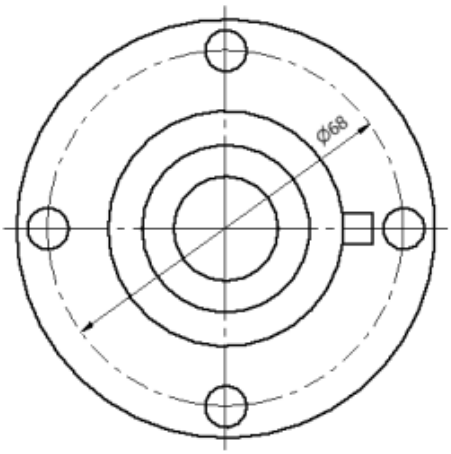


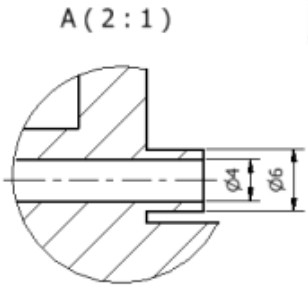
零件 2-6

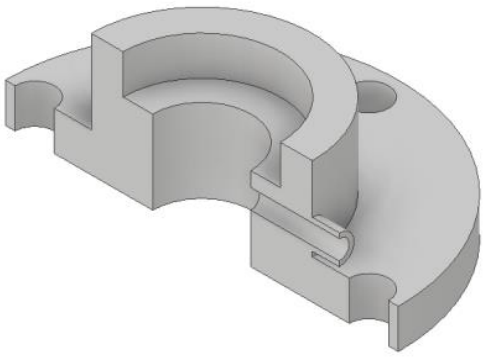


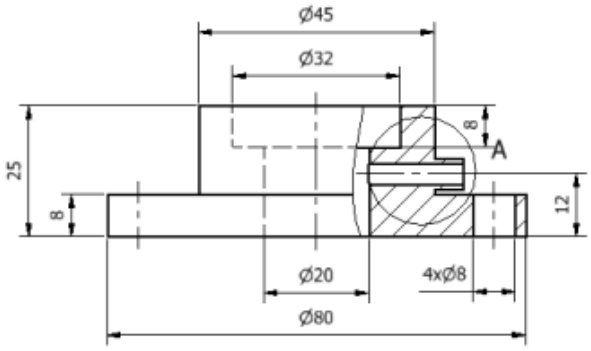
(a) 割面　(b) 局部剖切示意圖　(c) 局部剖視圖

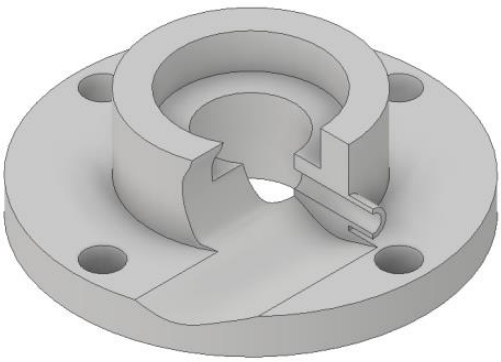








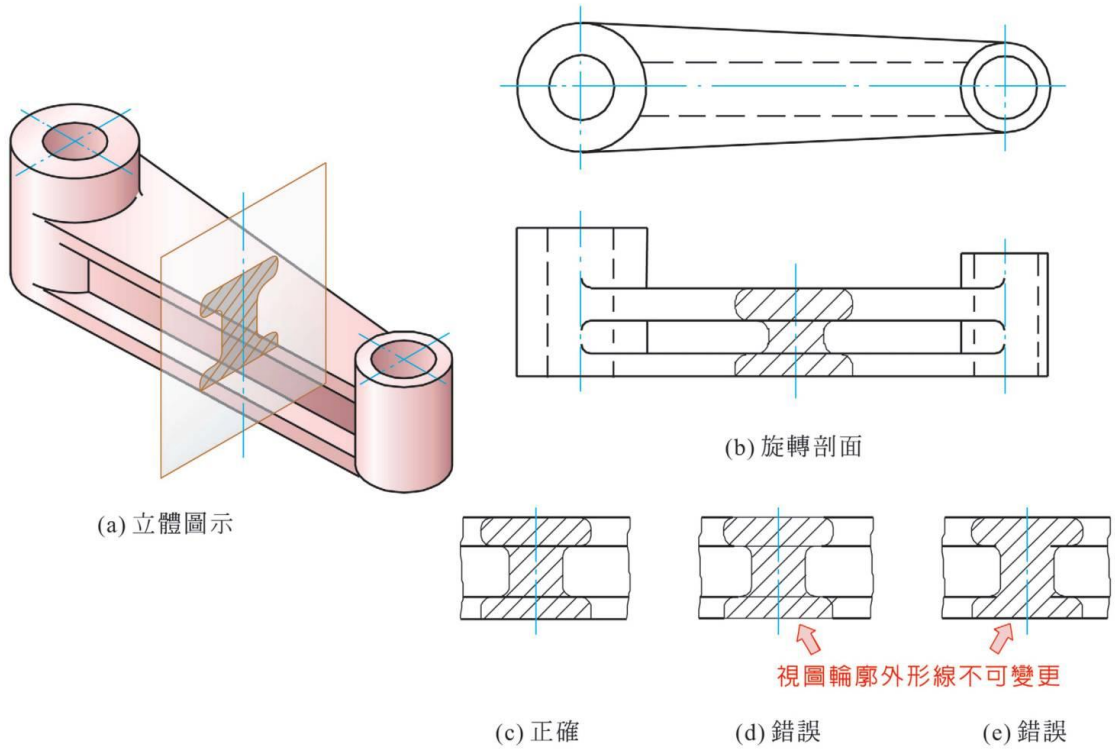




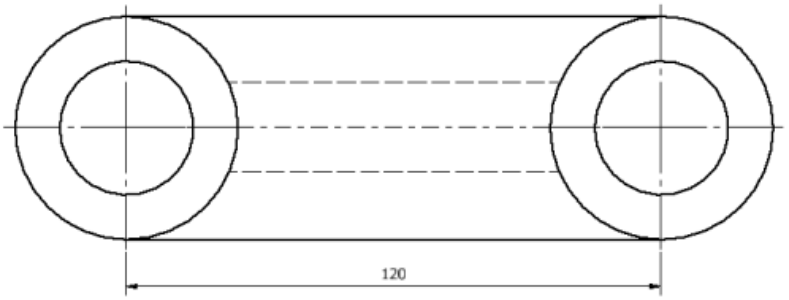
零件 2-7

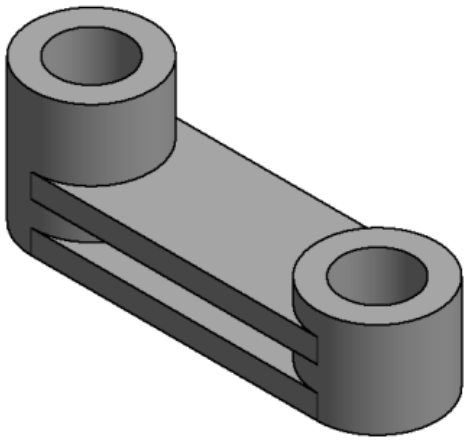
旋轉剖面

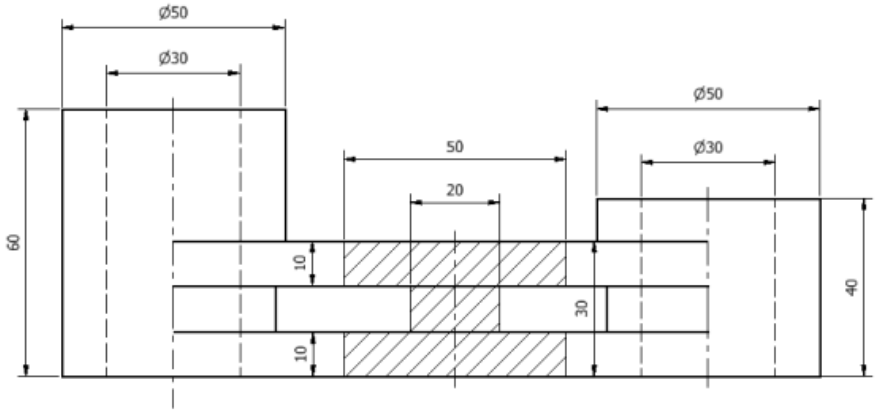
在機件上某一橫斷面處剖切，再將剖切處之割面原地旋轉 90°，以細實線重疊繪出剖視圖者，稱為旋轉剖面。



旋轉剖面之視圖輪廓外形線不可變更



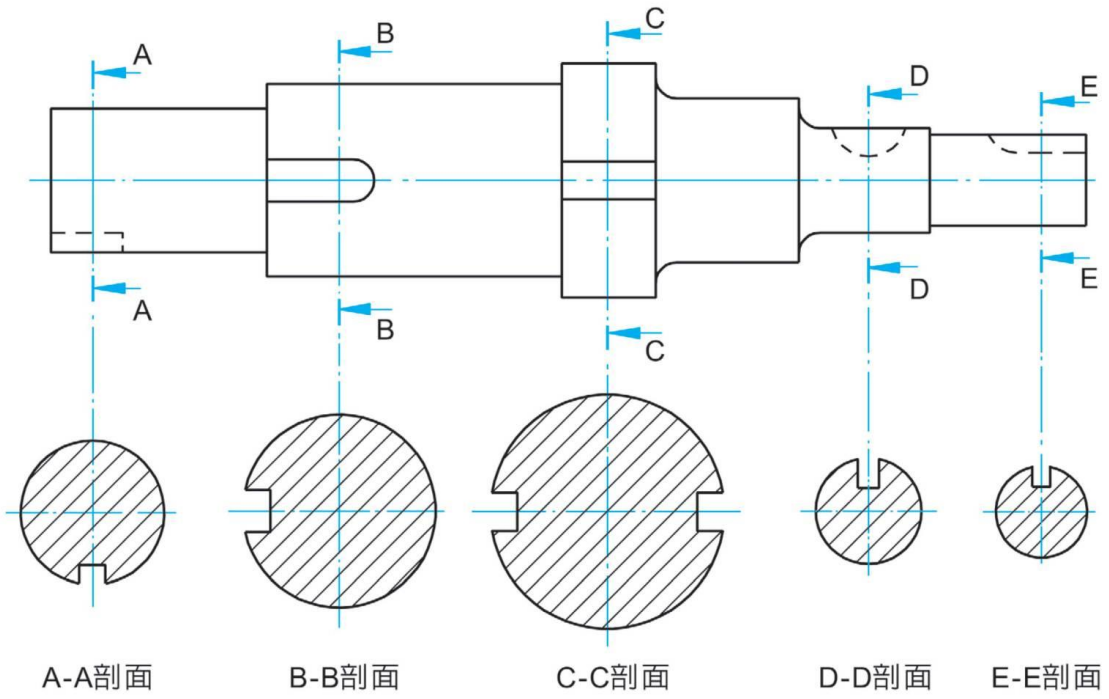


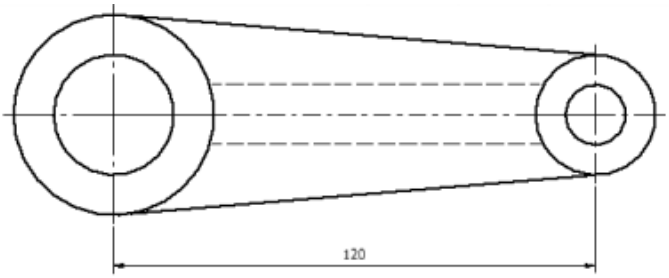


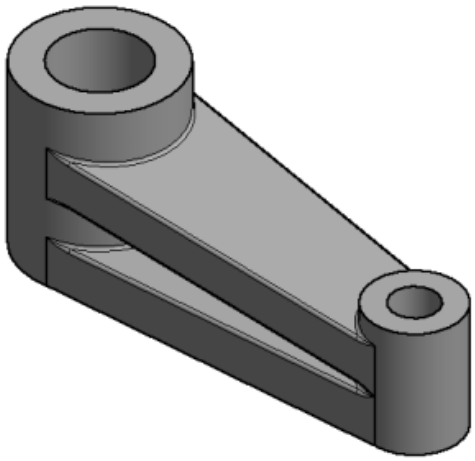
零件 2-8

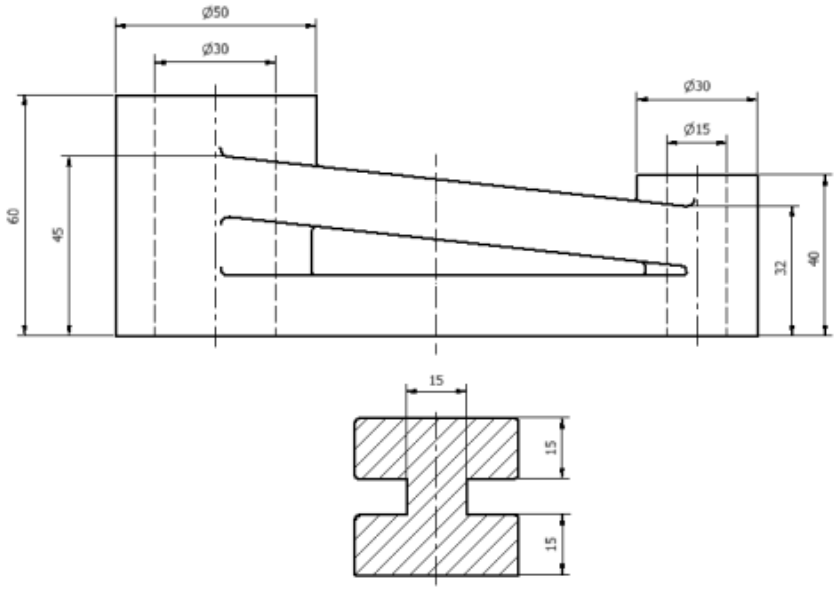
移轉剖面

將旋轉剖面沿割面線之方向，移出繪於原圖外者，稱為移轉剖面。(平移+旋轉)





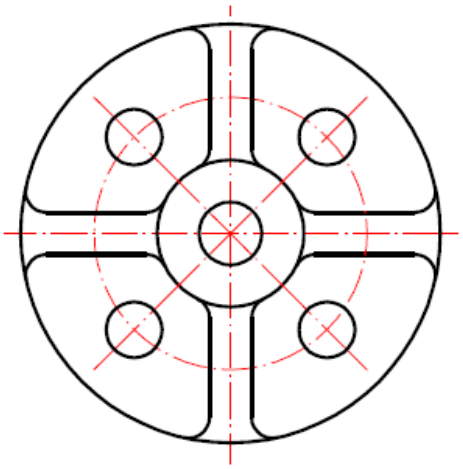


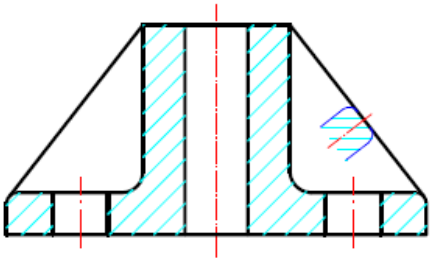


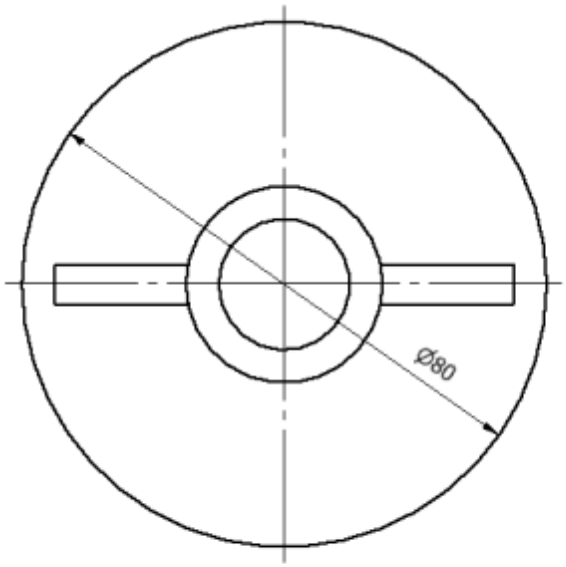
零件 2-9

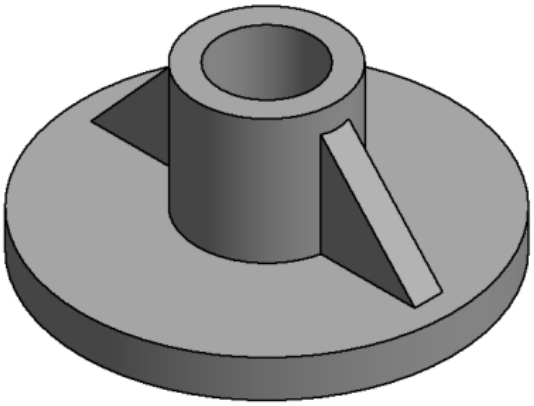
肋之剖面

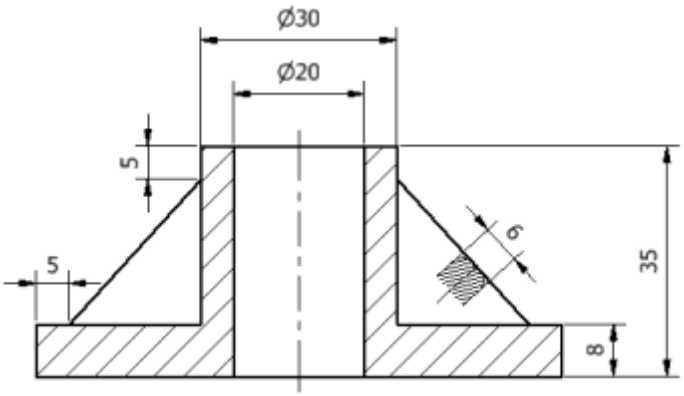
即肋被縱剖時不畫剖面線，但應以旋轉剖面來表示其斷面形狀。









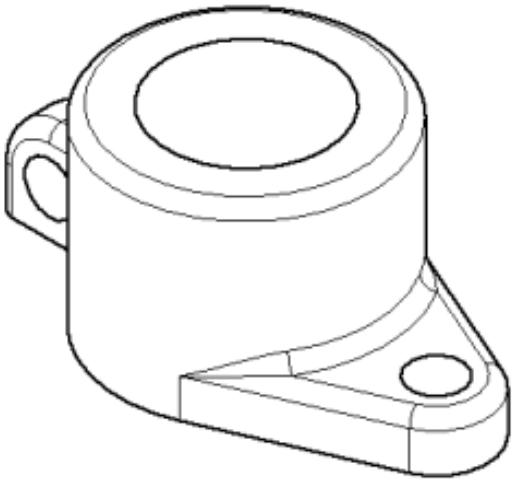


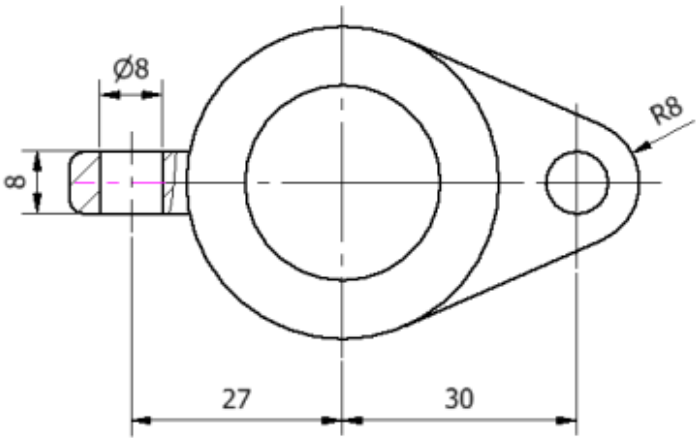
零件 2-10

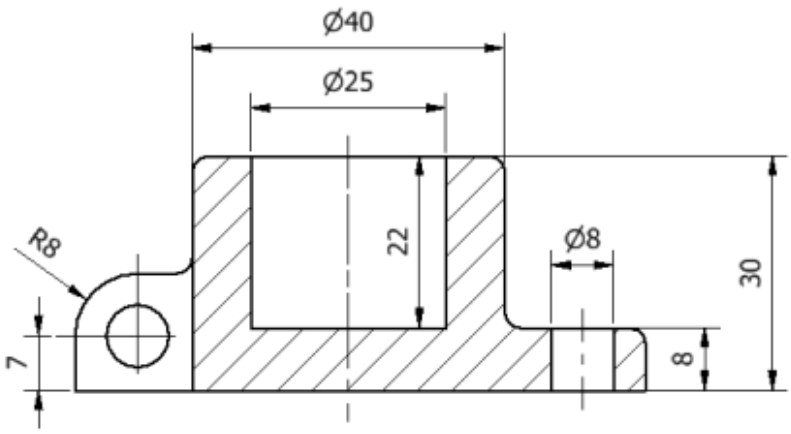
耳與凸緣之剖面

耳：與主體軸向平行的凸塊，割面沿主體軸剖切通過耳時，不畫剖面線。

凸緣：與主體軸向垂直或傾斜的凸塊，割面沿主體軸剖切通過凸緣時，則需畫剖面線。







零件 2-11

輪輻之剖面

實體輻板 ：連接於輪轂與輪緣間的實體輻板，其剖面應畫剖面線，如圖 A 所示。

輪輻（臂）：若連接輪轂與輪緣的肋臂或非全輪輻板者，其剖面不畫剖面線，而改以橫剖方式，加畫輪輻（臂）之旋轉剖面或移轉剖面來表達其斷面形狀，如圖 B 所示。

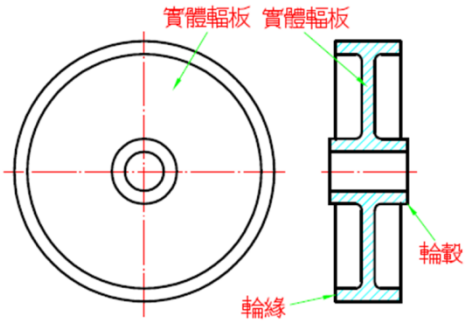


圖 A 實體輻板之剖面

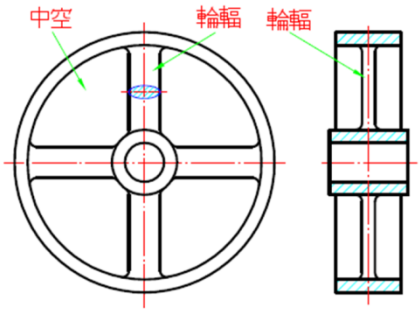
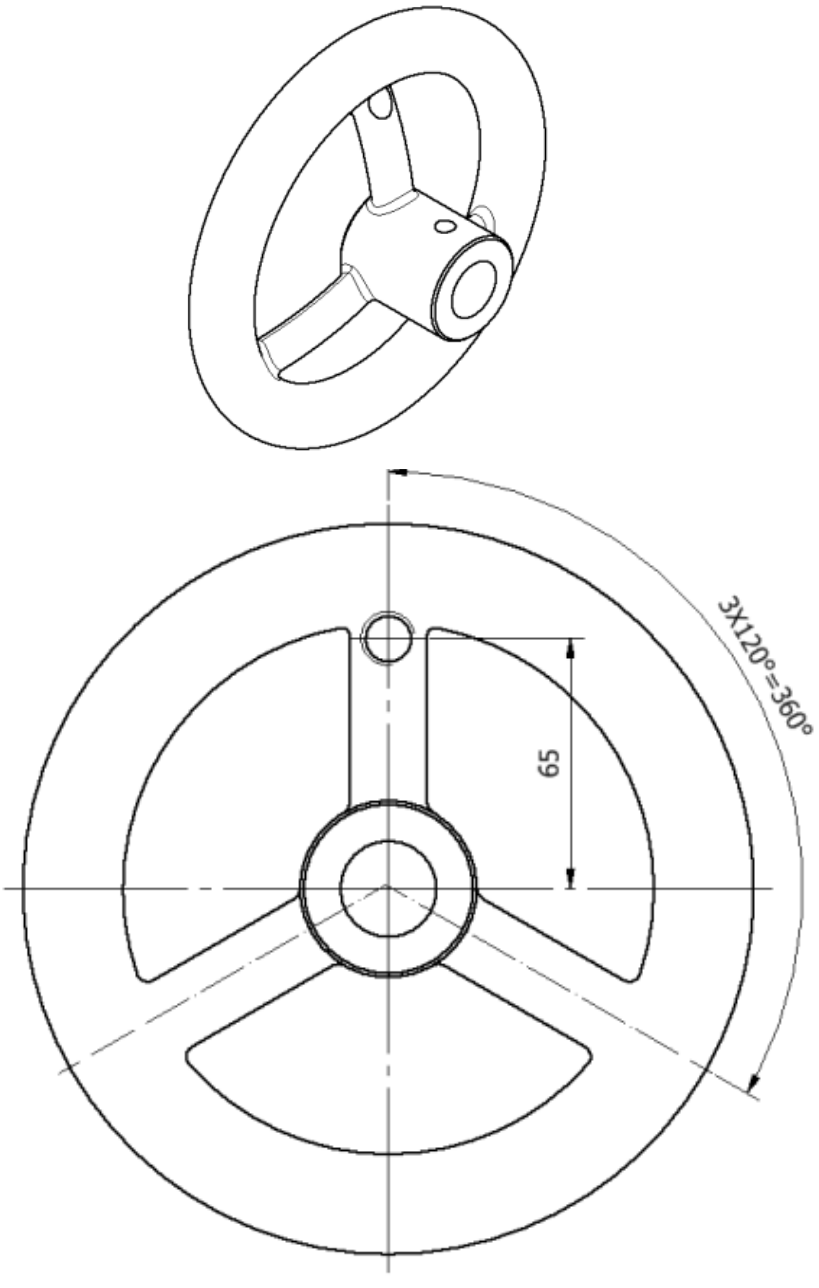


圖 B 輪輻（臂）之剖面

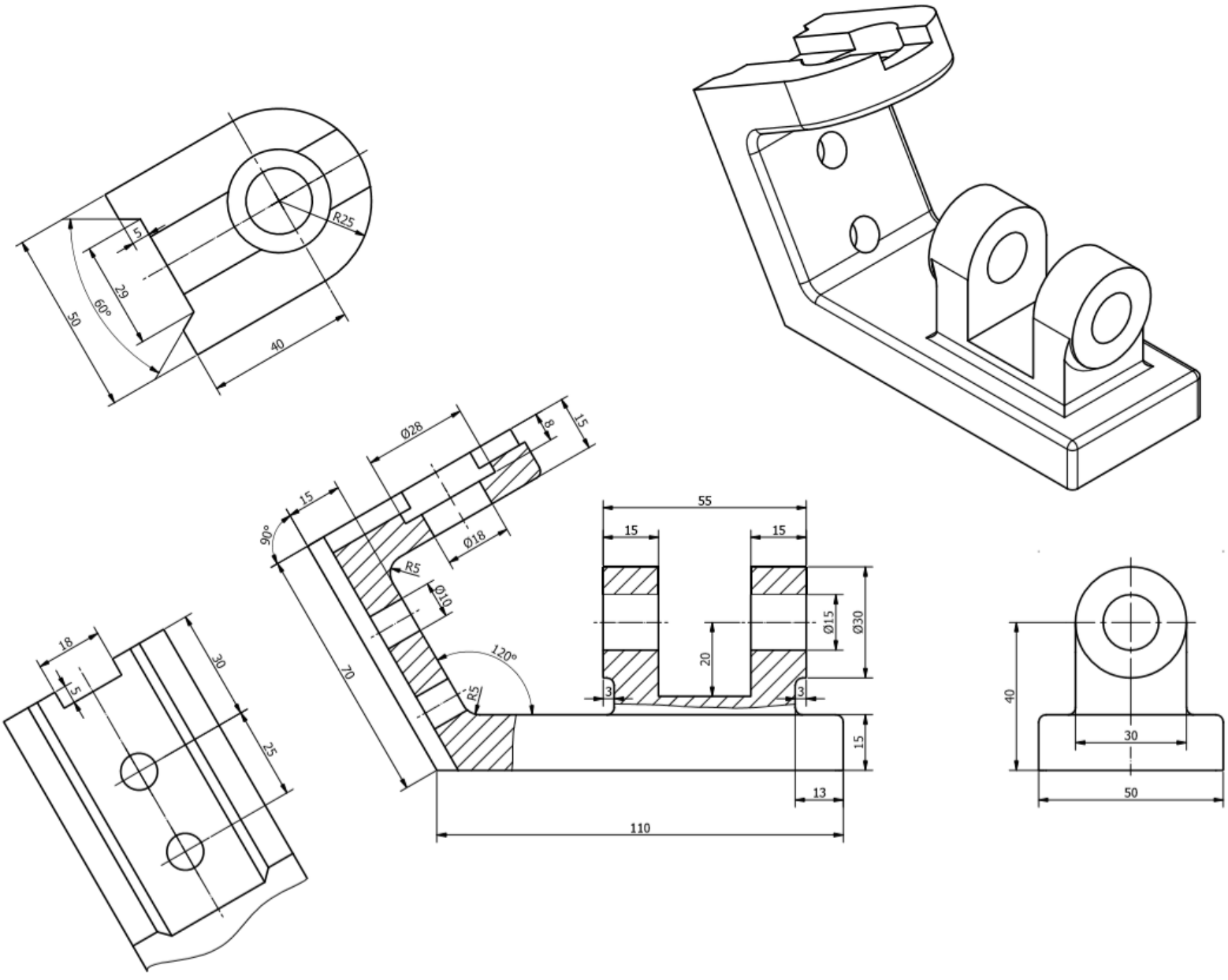


零件 3-1

局部視圖與輔助視圖

局部視圖：在繪製視圖時，可只繪製欲表達的某一部位，而省略或斷裂其他部分的視圖形狀，稱為局部視圖。

輔助視圖：物面為斜面時，為了顯示此斜面實形及大小，而且使閱圖及繪圖清晰易懂，我們便設法繪出此斜面的正垂視圖，此正垂視圖必為輔助視圖。

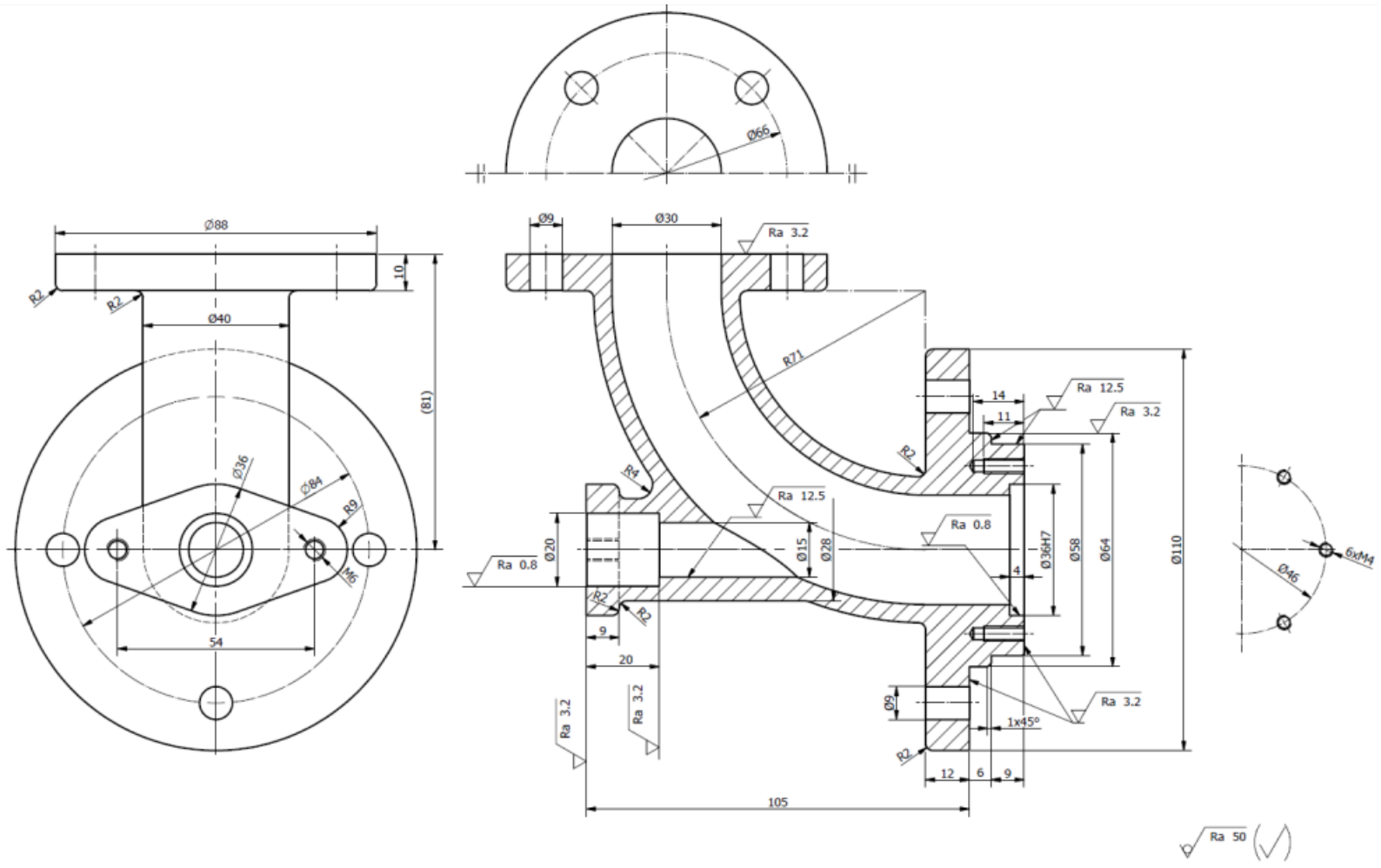


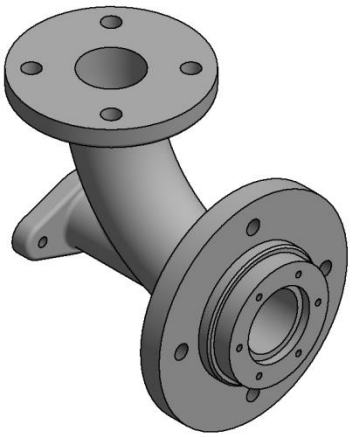
零件 3-2

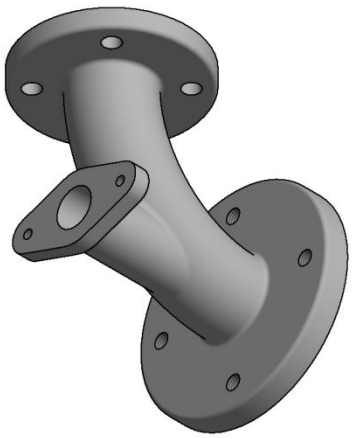
轉正視圖與全剖面轉正視圖

轉正視圖：繪製視圖時，為簡化視圖，得違反投影原理以習用表示法畫之，即常將物體與投影面不平行的部位，以某一適當的點為中心軸，將不平行部位旋轉至與投影面平行，再繪出此種視圖稱為轉正視圖。

全剖面轉正視圖：轉正視圖之概念應用於全剖面，即為全剖面轉正視圖。







授課用，請勿外傳。