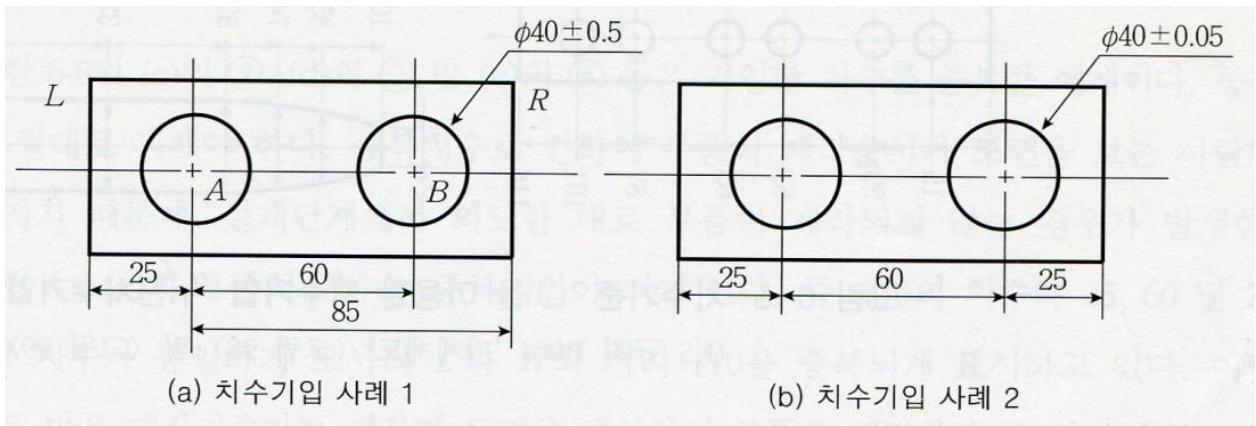
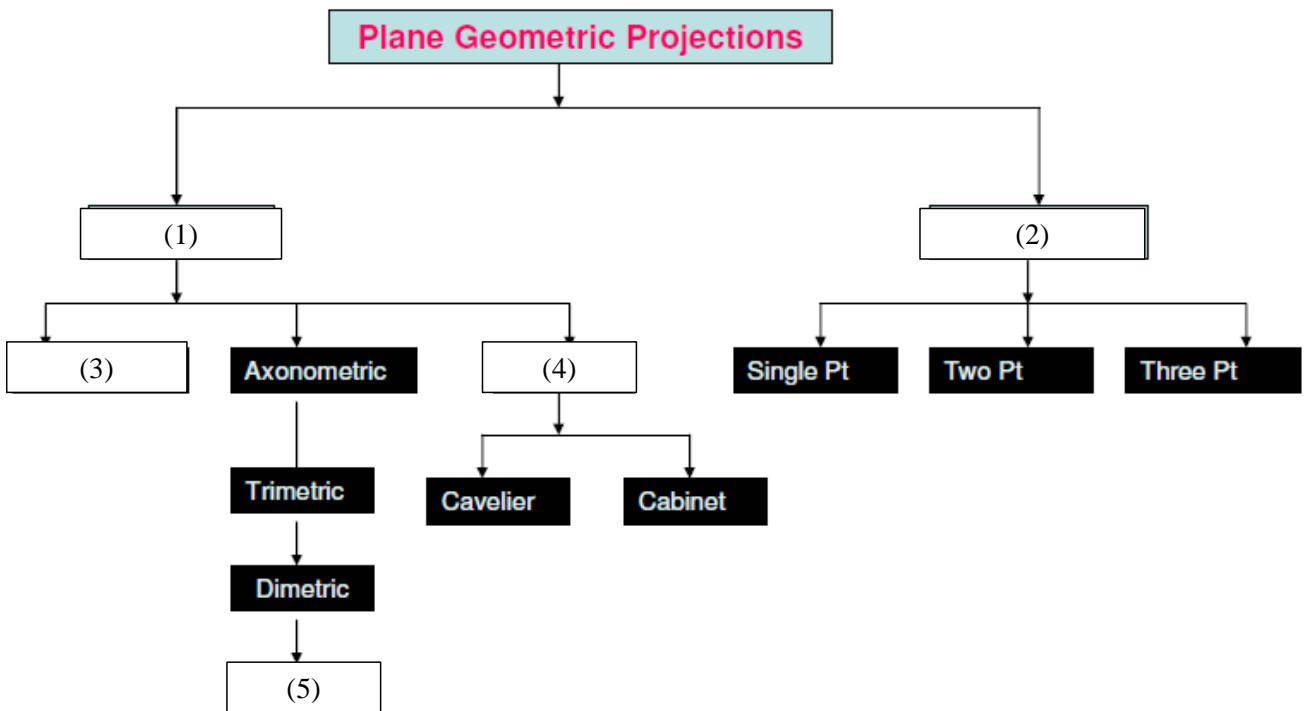


- (1) 평면에서 반사(reflection)는 원점을 지나는 임의의 직선에 대한 180도 회전임을 $y = -x$ 를 예로 설명하고 (2) 반사(reflection) 변환행렬과 회전행렬의 determinant를 각각 구하시오. (3) 회전행렬의 역행렬을 구하고 기하학적 의미를 설명하시오. (5 pts each)
- 주어진 위치벡터 $[3 \ 2 \ 1 \ 1]$ 를 (1) x, y, z 방향으로 각각 -1, -1, -1 평행이동 (2) x축에 대하여 +30도 회전하고 y축에 대하여 +45도 회전한 후 변환된 위치벡터를 구하시오. (10 pts)
- 아래 두 가지 치수기입 사례의 차이점을 (1) 제작순서(좌우길이) (2) 제작방법 관점에서 설명하시오. (10 pts)

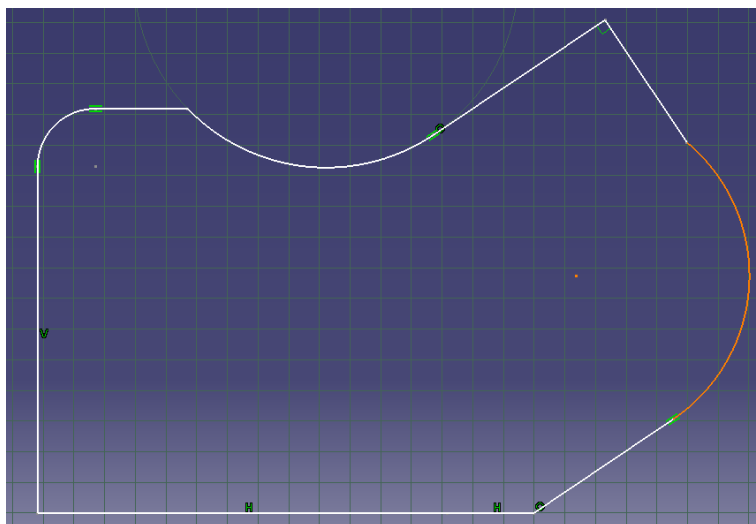


- 다음 평면 투상법 분류에서 빈 칸에 해당되는 용어를 영문/국문으로 모두 기입하시오. (2 pts each)

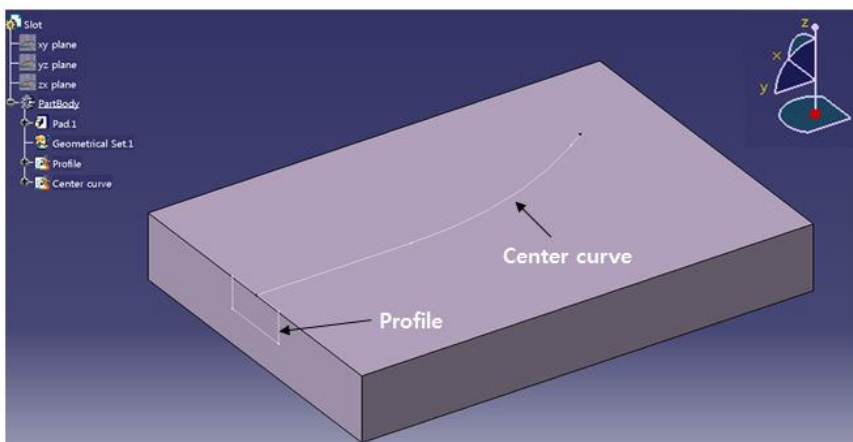


- 기하모델링 방법들 중 주로 사용하는 CSG와 B-Rep을 비교하시오. (영문명칭 포함) (5 pts each)

6. Sketcher 에서 Offset 기능을 적용 할 때 (a)~(e)의 기능을 설명하고, 아래 스케치에 적용한 결과를 각각 도시하시오. (2 pts each)



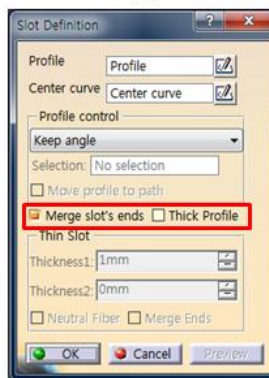
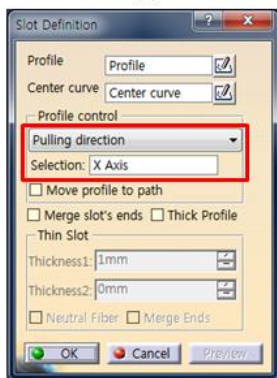
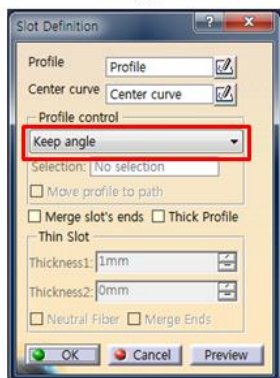
7. Part Design 에서 Slot 기능을 (a)~(c)와 같이 적용하였을 때 예상되는 결과를 각각 도시하고, 차이를 서술하시오. (2 pts each)



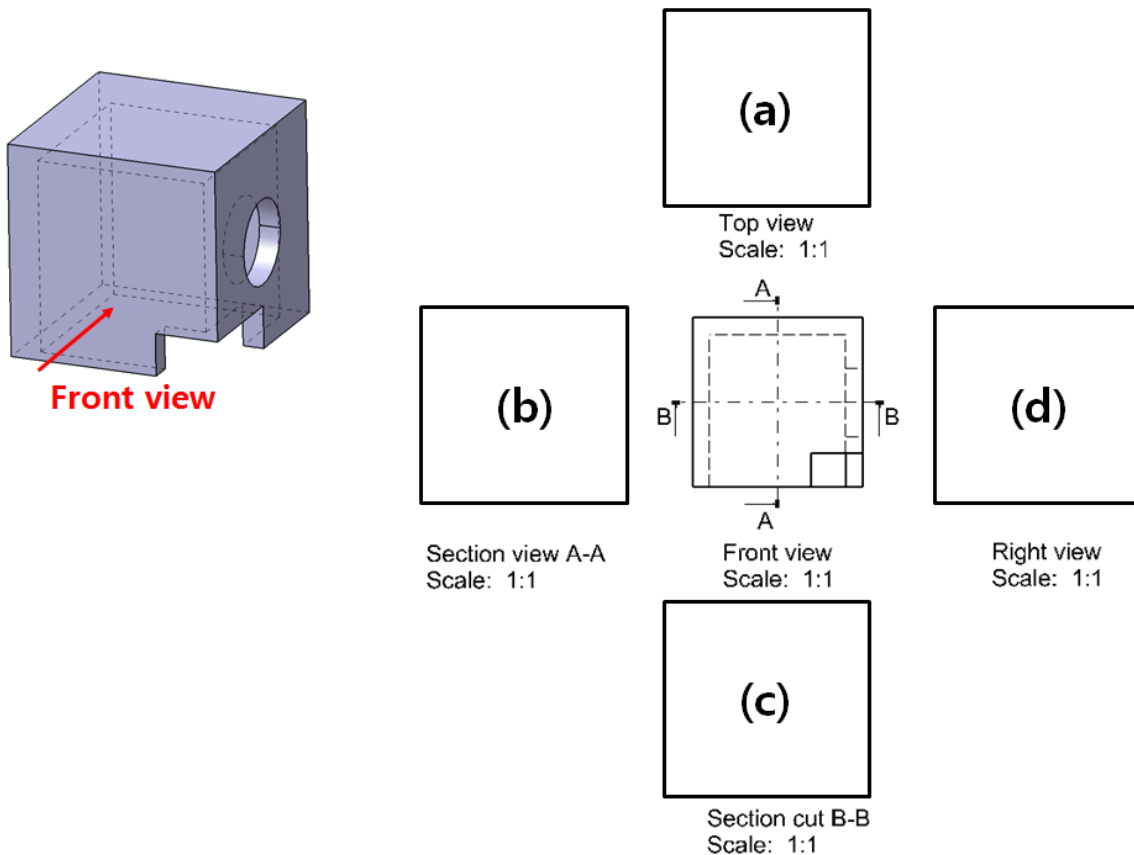
(a)

(b)

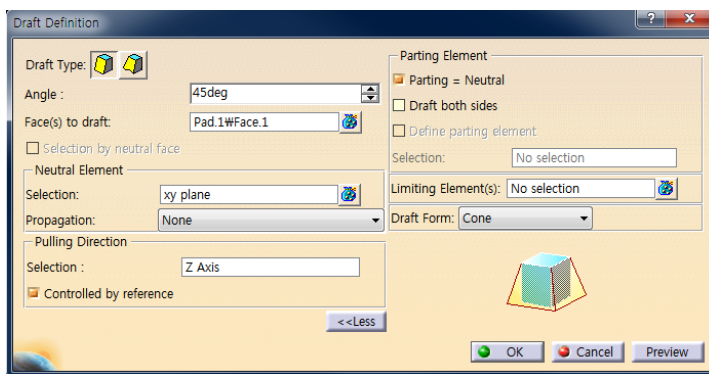
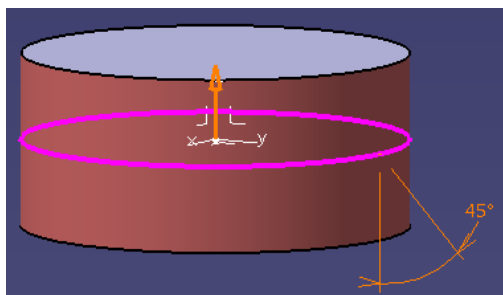
(c)



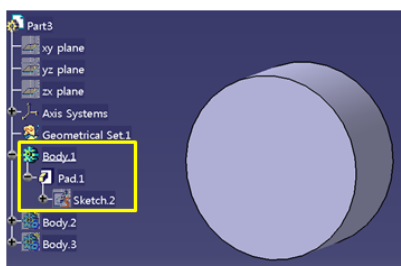
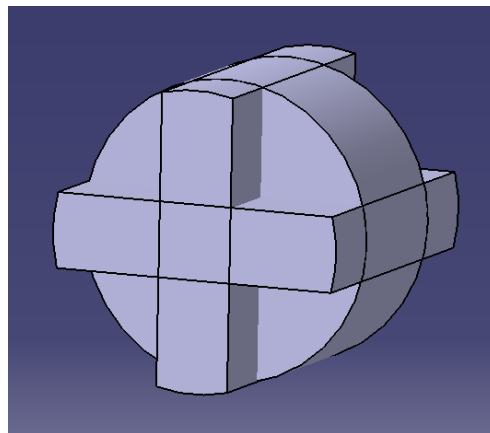
8. 아래의 3D 모델과 도면을 참고하여 (a)~(d)에 해당하는 결과를 도시하시오. (제 3 각법을 적용하고, hidden line, center line, axis 를 모두 표시할 것) (4 pts each)



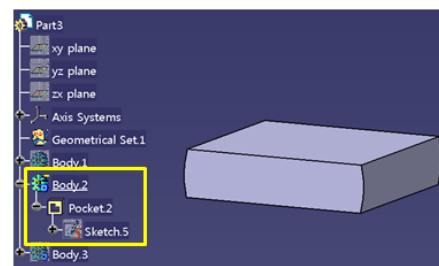
9. Part Design 에서 Draft Angle 기능을 아래와 같이 사용하였을 때 예상되는 결과를 도시하시오. (8 pts)



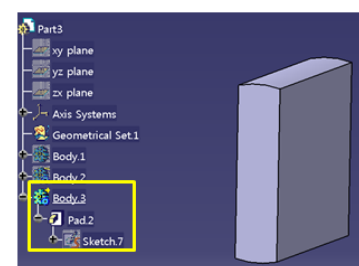
10. Part Design 에서 세 개의 Body 가 다음과 같이 구성되어 있을 때, 각 작업트리에 맞는 결과를 찾으시오. (2 pts each)



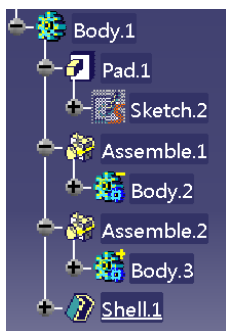
Body. 1



Body. 2



Body. 3



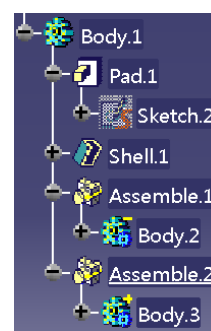
(a)



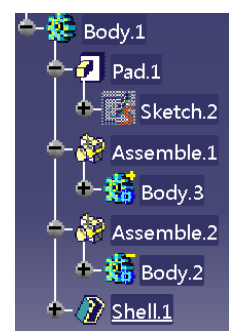
(b)



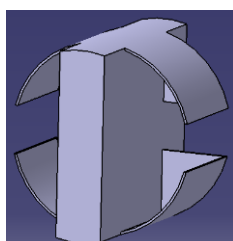
(c)



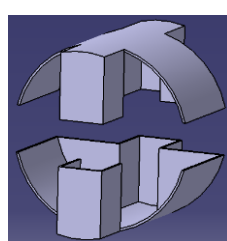
(d)



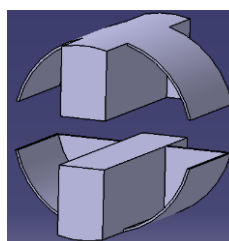
(e)



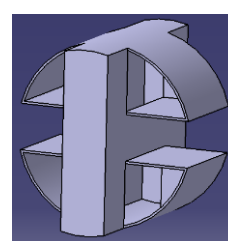
(1)



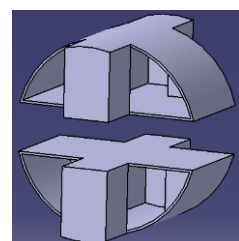
(2)



(3)



(4)



(5)