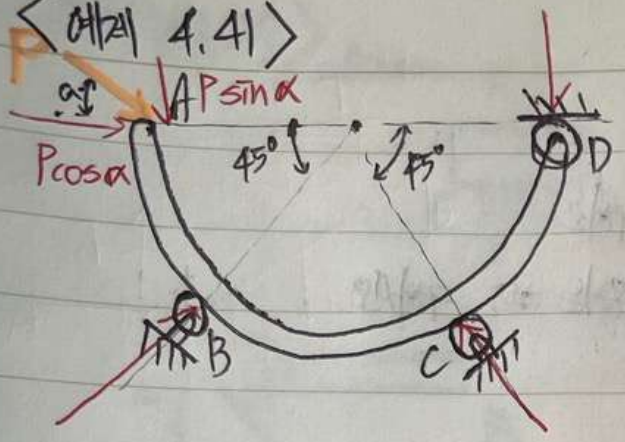
〈예제 4.41〉



$\alpha = 45°$ 일 때
B, C, D에 작용하는 힘을 구하시오.

$+\circlearrowleft \sum M_O = 0$: $(P\sin\alpha)R - D(R) = 0 \longrightarrow D = P\sin\alpha$ (1)

$\pm\rightarrow \sum F_x = 0$: $P\cos\alpha + (B/\sqrt{2}) - (C/\sqrt{2}) = 0$ (2)

$+\uparrow \sum F_y = 0$: $-2P\sin\alpha + (B/\sqrt{2}) + (C/\sqrt{2}) = 0$ (3)

(2)+(3) : $B = \frac{\sqrt{2}}{2}(2\sin\alpha - \cos\alpha)P$

(2)-(3) : $C = \frac{\sqrt{2}}{2}(2\sin\alpha + \cos\alpha)P$

$\alpha = 45°$: $\sin\alpha = \cos\alpha = \frac{1}{\sqrt{2}}$

$B = \frac{P}{2}$ ∠45°

$C = \frac{3}{2}P$ ∠45°

$D = \frac{\sqrt{2}}{2}P$ ↓