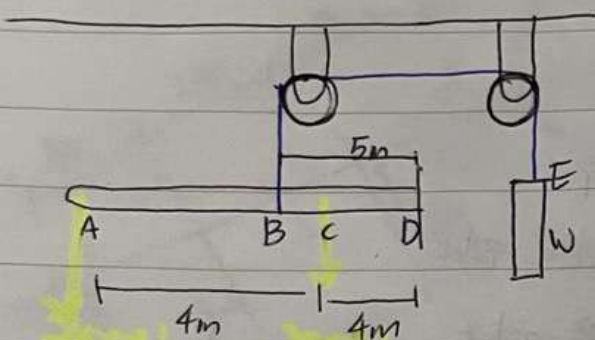
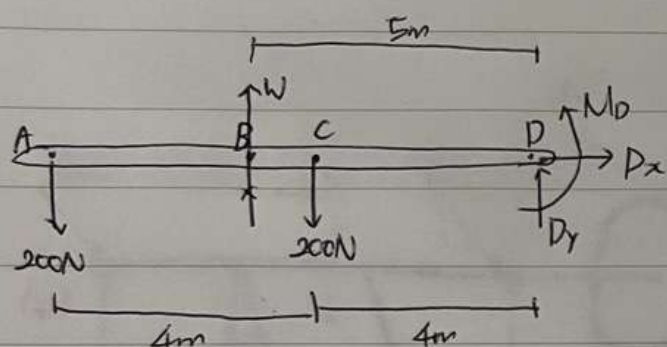


<예제 4.48>



(a) $W = 500\text{N}$, D에 대한 반응

(b) $W = 450\text{N}$, D에 대한 반응



(a) $W = 500\text{N}$

$$\pm \sum F_x = 0 : D_x = 0$$

$$+\uparrow \sum F_y = 0 : D_y - 200\text{N} - 200\text{N} + 500\text{N} = 0$$

$$\underline{D_y = -100\text{N}}$$

$$+\circlearrowleft \sum M_D = 0 : M_D - (500\text{N})(5\text{m}) + (200\text{N})(8\text{m}) + (200\text{N})(4\text{m}) = 0$$

$$\underline{M_D = 100\text{N}\cdot\text{m}}$$

(b) $W = 450\text{N}$

$$\pm \sum F_x = 0 : D_x = 0$$

$$+\uparrow \sum F_y = 0 : D_y + 450\text{N} - 200\text{N} - 200\text{N} = 0$$

$$\underline{D_y = -50\text{N}}$$

$$+\circlearrowleft \sum M_D = 0 : M_D - (450\text{N})(5\text{m}) + (200\text{N})(8\text{m}) + (200\text{N})(4\text{m}) = 0$$

$$\underline{M_D = -150\text{N}\cdot\text{m}}$$