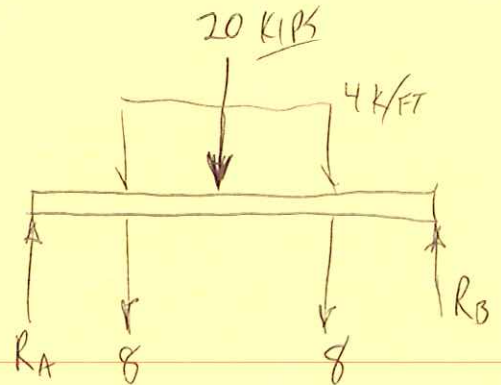
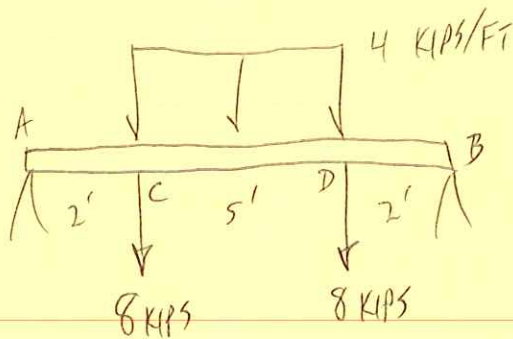


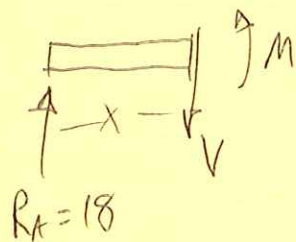
EXAMPLE PROB. 7.41



BY SYMMETRY,

$$R_A = R_B = \frac{1}{2}(8 + 8 + 20) = 18 \text{ KIPS}$$

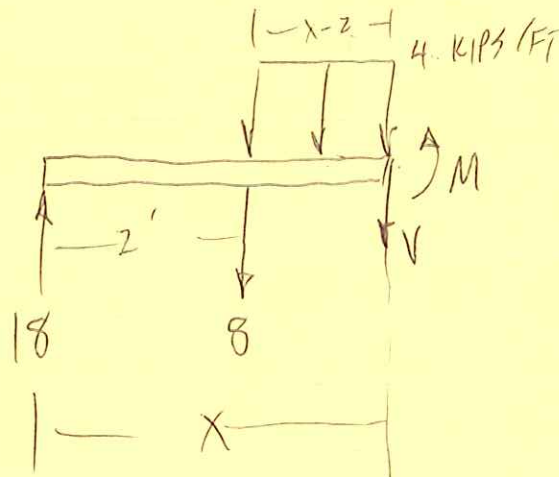
FBD BETWEEN A + C :  $x = 0^+$  TO  $2^-$  FT



$$V = 18 \text{ KIPS}$$

$$M = 18X$$

FBD BETWEEN C AND D :  $x = 2^+$  TO  $7^-$  FT



$$\Sigma F_y = 0:$$

$$18 - 8 - (4 \frac{\text{KIPS}}{\text{FT}})(x - 2 \text{ FT}) - V = 0$$

$$V = 18 - 4X \text{ KIPS}$$

$$\Sigma M = 0 \uparrow : M - 18x + 8(x - 2) + (4)(x - 2)(\frac{x - 2}{2}) = 0$$

$$M = -2x^2 + 18x + 8$$

SHEAR AND BENDING MOMENT DIAGRAMS: SYMMETRIC

AT  $x=0$ ,  $V=18$ ,  $M=0$

AT  $x=2'$ ,  $V=18$ ,  $M=36$  FT-KIPS

AT  $x=2\text{ FT} +$ ,  $V=10$  KIPS,  $M=36$

AT  $x=4.5$  FT,  $V=0$ ,  $M=48.5$

