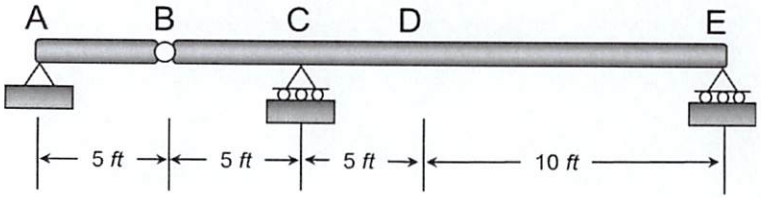
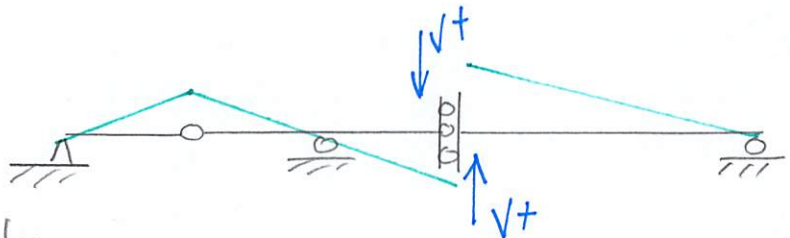
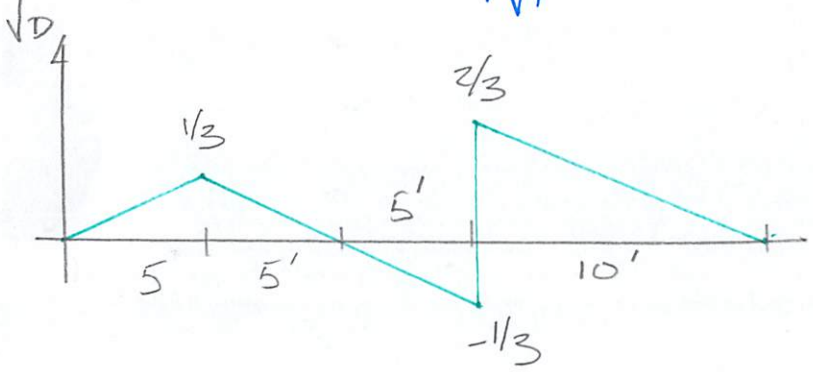
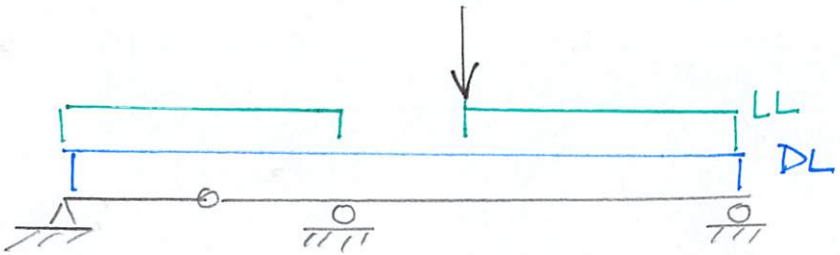
Example 6b-2: Determine the maximum positive shear force that can be developed at point D in the beam shown below due to a concentrated live load of 4 k, a uniform live load of 300 lb/ft, and a dead load of 200 lb/ft.









$$V_{D_{MAX}}^{+} = 4k(2/3) \qquad \text{LIVE CONCENTRATED FORCE}$$

UNIFORM DEAD LOAD

$$+ 0.2k/ft\left(\tfrac{1}{2}\right)\left[10'(1/3) + 5'(-1/3) + 10'(2/3)\right]$$

UNIFORM LIVE LOAD

$$+ 0.3k/ft\left(\tfrac{1}{2}\right)\left[10'(1/3) + 10'(2/3)\right]$$

$$= [2.67 + 0.833 + 1.5]\,kN$$

$$= \underline{\underline{5\,kN}}$$