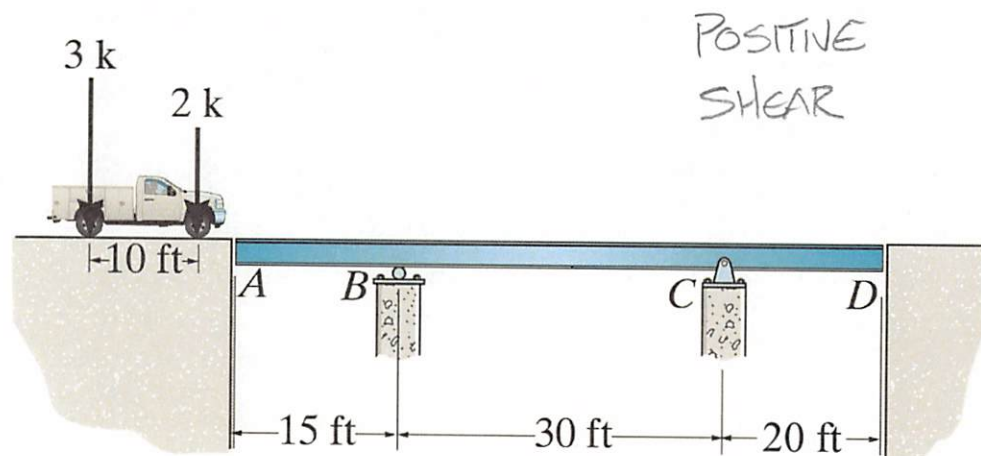
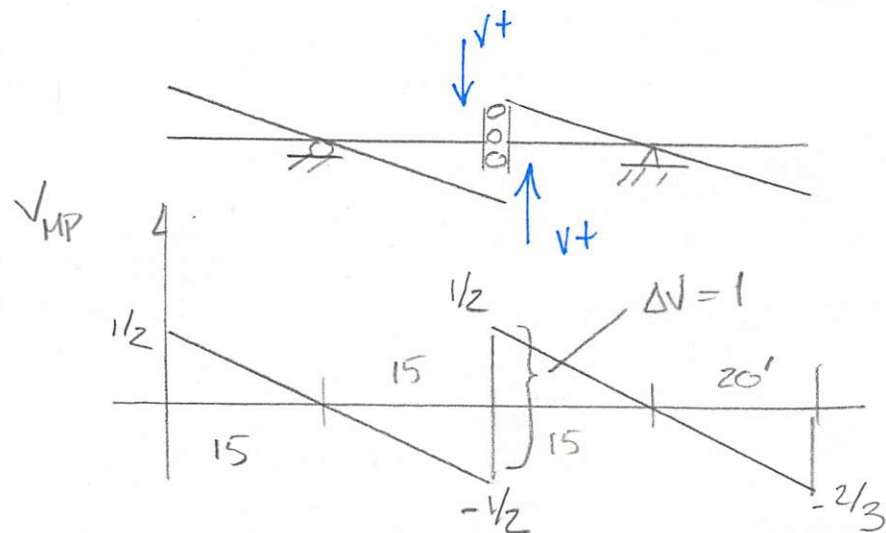


Example 6c-4: Determine the maximum shear created at mid-point BC span in the beam below due to the wheel loads of a moving truck.



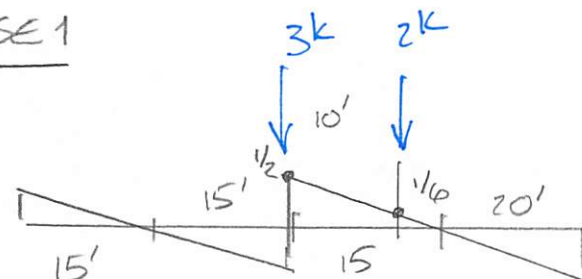
POSITIVE
SHEAR



$$\frac{1/2}{15} = \frac{?}{20}$$

$$\frac{20(1/2)}{15} = \frac{2}{3}$$

CASE 1

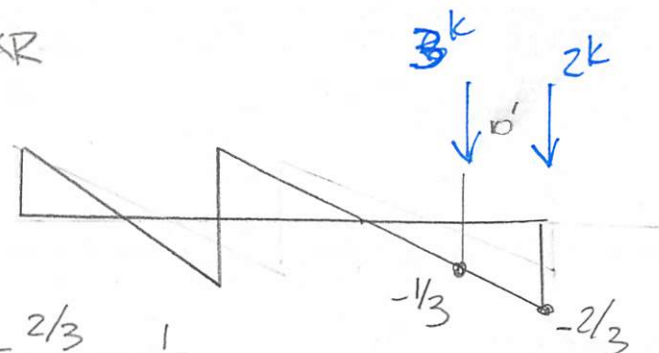


$$\text{SLOPE } \frac{1/2}{15} = \frac{1}{30}$$

$$V_{MP} = 3k\left(\frac{1}{2}\right) + 2k\left(\frac{1}{6}\right) = \underline{1.83k}$$

NEGATIVE SHEAR

CASE 1



$$\text{SLOPE} = \frac{2/3}{20} = \frac{1}{30}$$

$$V_{MP} = 2k\left(-\frac{2}{3}\right) + 3k\left(-\frac{1}{3}\right) = \underline{-2.33k}$$

$$\underline{\underline{V_{MP_{MAX}} = -2.33k}}$$