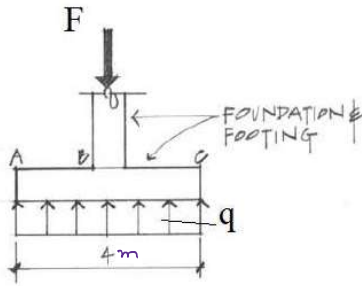


## Shear and Moment Diagrams:

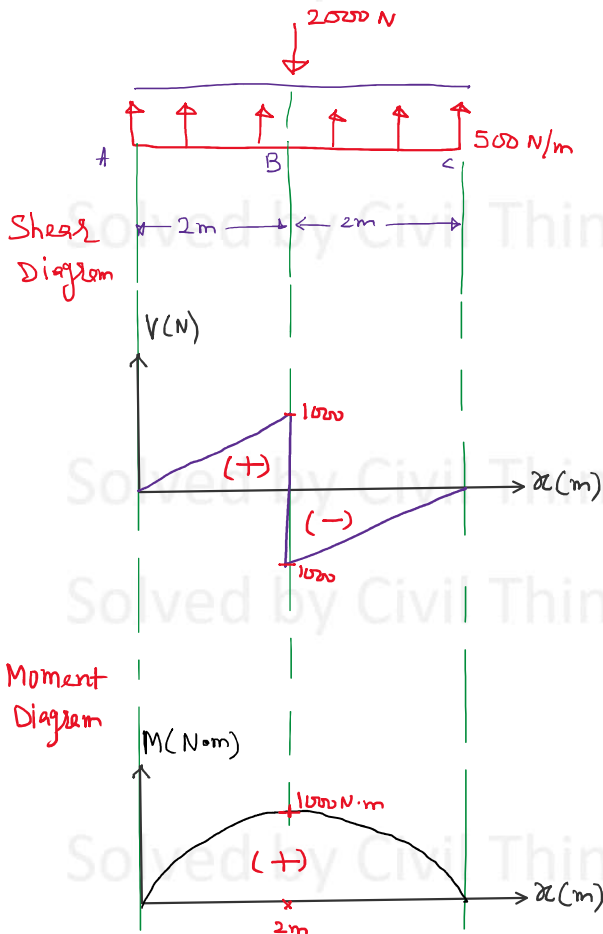
4. The diagram shows a bearing load on a spread footing.  
Draw the load, shear, and moment diagrams of the figure shown.  $F=2000\text{N}$ ,  $q=500\text{N/m}$ .



$$+\uparrow \sum F_y = 0$$

$$(q \times 4\text{m}) - F = 0$$

$$500 \times 4 - 2000 = 0 \quad [\text{True}]$$



Shear Forces :-

$$V_A = 0$$

$$V_B^- = 500 \text{ N/m} \times 2\text{m} = 1000 \text{ N}$$

$$V_{B^+} = V_B^- - 2000 \text{ N} = -1000 \text{ N}$$

$$V_C = 0$$

Moments :-

$$M_A = 0$$

$$M_B = 500 \text{ N/m} \times 2\text{m} \times \frac{2\text{m}}{2} = 1000 \text{ N}\cdot\text{m}$$

$$M_C = 0$$

This problem was solved by Civil Thinking (<https://civilthinking.com>)

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