

## Quick Ways To Draw (V) & (M) Diagrams

To draw the internal shear diagrams:

“Look at the given beam structure, observe how the shear forces applied on the beam. Then, draw the (V) diagram accordingly”

To draw the internal moment diagrams:

Step 1: Refer to the shear diagram, and compute the areas under the shear diagram sections

Step 2: Compute the initial value of <sup>internal</sup> moment (including the proper sign), say  $M_{(1)}$

Step 3: Apply the formula:  $M_{(2)} - M_{(1)} = \text{area under (V) diagram, between sections (1) \& (2)}$  to compute  $M_{(2)}$

Step 4: Decide how to connect the (two) dots in the (M) diagram, by referring to Eq.  $\frac{dM}{dx} = V$  ; or  $M_{(2)} - M_{(1)} = \int_{(1)}^{(2)} V dx$