

QUESTION

Figure 1 shows the cross-section of a beam of length L and width b . The beam is subjected to a uniformly distributed load w acting downwards. The beam is supported by a pin support at the left end and a roller support at the right end. The beam is divided into two equal segments of length $L/2$ by a vertical dashed line.



Segment	Length	Width	Load	Support
1	$L/2$	b	w	Pin
2	$L/2$	b	w	Roller

Figure 2 shows the shear force diagram for the beam. The shear force is zero at the left end and increases linearly to a maximum value of $wL/4$ at the midpoint. The shear force then decreases linearly to zero at the right end.

ANSWER

The shear force diagram for the beam is shown in Figure 2. The shear force is zero at the left end and increases linearly to a maximum value of $wL/4$ at the midpoint. The shear force then decreases linearly to zero at the right end.



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