

Figure 1: A diagram showing a structural member with various loads and supports. It includes a distributed load 'w', a point load 'P', and reaction forces at the ends.

Figure 2: A diagram illustrating the internal forces in a beam. It shows the shear force diagram (V) and the bending moment diagram (M) along the length of the beam.

Figure 3: A diagram showing the relationship between shear force and bending moment. It includes the differential equations:  $\frac{dM}{dx} = V$  and  $\frac{dV}{dx} = -w$ .

Figure 4: A diagram showing the integration of the differential equations to find the shear force and bending moment. It includes the equations:  $V = -wx + C_1$  and  $M = -\frac{w}{2}x^2 + C_1x + C_2$ .

Figure 5: A diagram showing the boundary conditions for a simply supported beam.

Figure 6: A diagram showing the final equations for shear force and bending moment for a simply supported beam under a uniformly distributed load.

Figure 7: A diagram showing the shear force and bending moment diagrams for a simply supported beam.

Figure 8: A diagram showing the shear force and bending moment diagrams for a beam with a point load and a uniformly distributed load.

Figure 9: A diagram showing the shear force and bending moment diagrams for a beam with a point load.

Figure 10: A diagram showing the shear force and bending moment diagrams for a beam with a point load and a uniformly distributed load.

Figure 11: A diagram showing the shear force and bending moment diagrams for a beam with a point load.

Figure 12: A diagram showing the shear force and bending moment diagrams for a beam with a point load and a uniformly distributed load.

Figure 13: A diagram showing the shear force and bending moment diagrams for a beam with a point load.

Figure 14: A diagram showing the shear force and bending moment diagrams for a beam with a point load and a uniformly distributed load.

Figure 15: A diagram showing the shear force and bending moment diagrams for a beam with a point load.

Figure 16: A diagram showing the shear force and bending moment diagrams for a beam with a point load and a uniformly distributed load.

Figure 17: A diagram showing the shear force and bending moment diagrams for a beam with a point load.

Figure 18: A diagram showing the shear force and bending moment diagrams for a beam with a point load and a uniformly distributed load.

Figure 19: A diagram showing the shear force and bending moment diagrams for a beam with a point load.

Figure 20: A diagram showing the shear force and bending moment diagrams for a beam with a point load and a uniformly distributed load.

Figure 21: A diagram showing the shear force and bending moment diagrams for a beam with a point load.

Figure 22: A diagram showing the shear force and bending moment diagrams for a beam with a point load and a uniformly distributed load.

Figure 23: A diagram showing the shear force and bending moment diagrams for a beam with a point load.

Figure 24: A diagram showing the shear force and bending moment diagrams for a beam with a point load and a uniformly distributed load.

Figure 25: A diagram showing the shear force and bending moment diagrams for a beam with a point load.

Figure 26: A diagram showing the shear force and bending moment diagrams for a beam with a point load and a uniformly distributed load.

Figure 27: A diagram showing the shear force and bending moment diagrams for a beam with a point load.

Figure 28: A diagram showing the shear force and bending moment diagrams for a beam with a point load and a uniformly distributed load.

Figure 29: A diagram showing the shear force and bending moment diagrams for a beam with a point load.

Figure 30: A diagram showing the shear force and bending moment diagrams for a beam with a point load and a uniformly distributed load.

Figure 31: A diagram showing the shear force and bending moment diagrams for a beam with a point load.

Figure 32: A diagram showing the shear force and bending moment diagrams for a beam with a point load and a uniformly distributed load.

Figure 33: A diagram showing the shear force and bending moment diagrams for a beam with a point load.