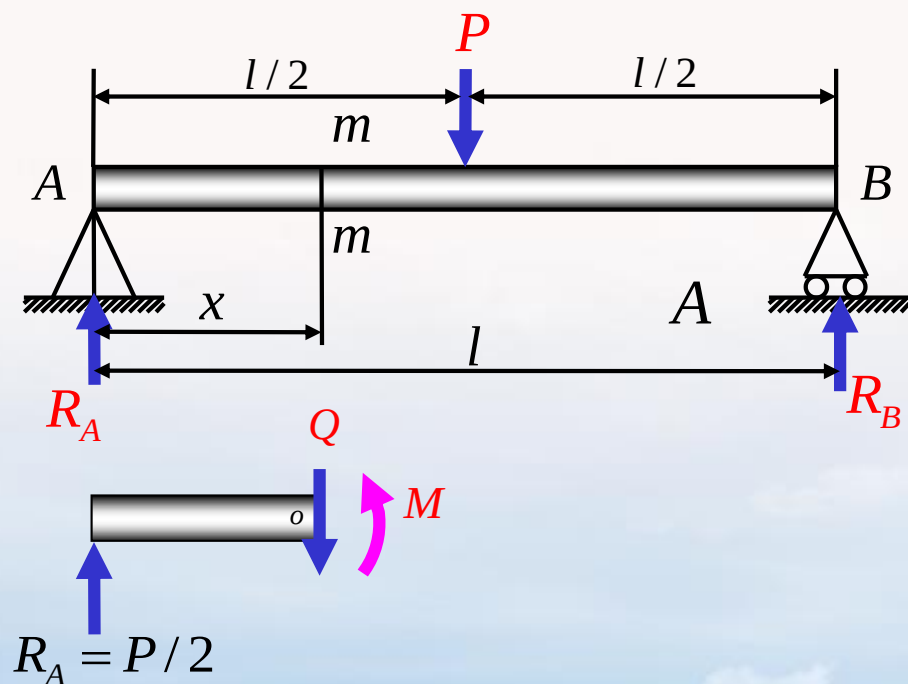


剪力和弯矩



梁的弯曲

(二) 剪力和弯矩



Q : 剪力

M : 弯矩

$$R_A = R_B = P/2$$

左段:

$$\sum F_y = 0, R_A - Q = 0$$

$$Q = R_A = P/2$$

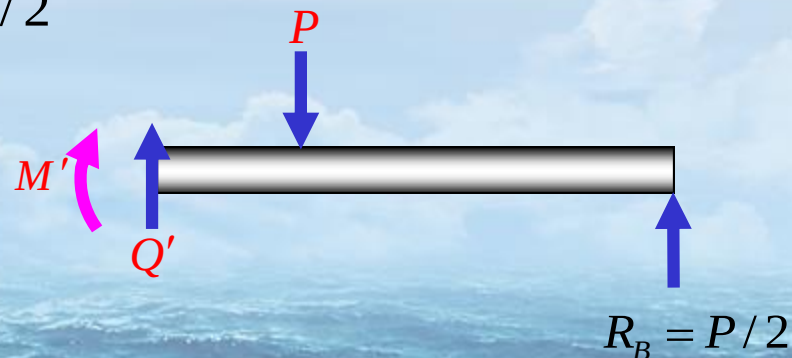
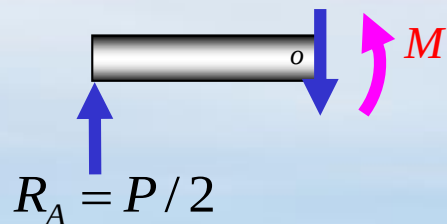
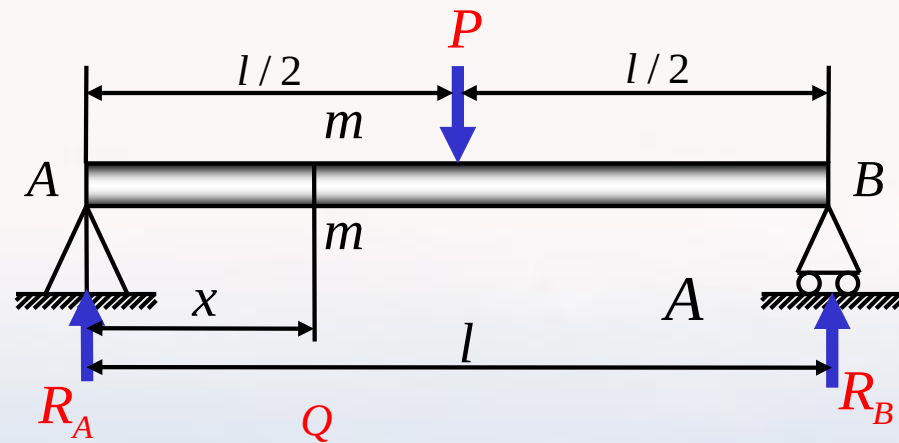
$$\sum m_o = 0, M - R_A \cdot x = 0$$

$$M = R_A \cdot x = \frac{P}{2} \cdot x$$



梁的弯曲

(二) 剪力和弯矩



右段:

$$\Sigma F_y = 0, \quad Q' - P + R_B = 0$$

$$Q' = P - R_B = P/2$$

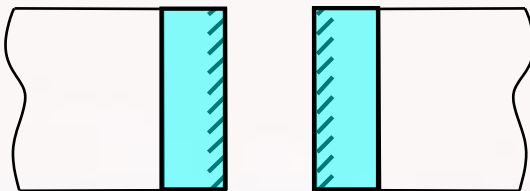
$$\Sigma m_o = M' + P\left(\frac{l}{2} - x\right) - R_B(l - x) = 0$$

$$M' = R_B(l - x) - P\left(\frac{l}{2} - x\right) = \frac{P}{2}x$$

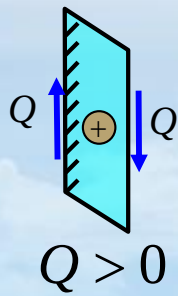
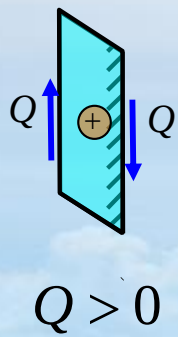


梁的弯曲

横截面上**剪力**和**弯矩**正负号的规定



(1) 剪力



(2) 弯矩

