



Universidad Del Sureste

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Nombre De La Materia: Estática Para La Arquitectura

Nombre De La Actividad: Problema

Carrera: Arquitectura

Grado: 3er Cuatrimestre

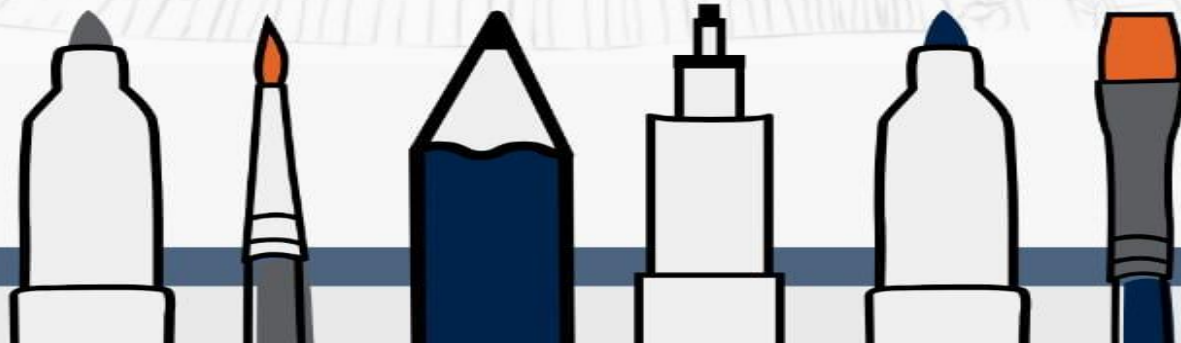


Diagram 1: A triangular load with a peak of 0.32 t/m over a base of 6 . The load is supported at points A and B, which are 3 units apart. The reaction at B is 0.96 t .

$$P = \frac{0.32(6)}{2} = 0.96$$

$$UR = \frac{L}{2} = \frac{6}{2} = 3$$

Diagram 2: A triangular load with a peak of 0.32 t/m over a base of 10 . The load is supported at points C and D, which are 3 units apart. The reaction at D is 1.10 t .

$$P = \frac{0.32(10)}{2} = 0.96$$

$$UR = \frac{L}{2} = \frac{10}{2} = 5$$

Diagram 3: A rectangular load with a peak of 0.32 t/m over a base of 10 . The load is supported at points C and D, which are 3 units apart. The reaction at D is 2.0 t .

$$P = 0.32(10) = 3.2$$

$$UR = \frac{L}{2} = \frac{10}{2} = 5$$

Diagram 4: A rectangular load with a peak of 0.7 t/m over a base of 10 . The load is supported at points C and D, which are 3 units apart. The reaction at D is 2.96 t .

$$P = 0.7(10) = 7$$

$$UR = \frac{L}{2} = \frac{10}{2} = 5$$

Equation 1: $(0.96)(3) + (B)(6) = 0 \Rightarrow A = -0.96 + 0.48 = 0$

Equation 2: $-2.88 + 1.6 = 0 \Rightarrow B = \frac{2.88}{2} = 1.44$

Equation 3: $B = 0.48 \text{ ton}$

Equation 4: $(-0.96)(2) + (-1.10)(5) + (D)(6) = 0$

Equation 5: $-2.88 - 5.5 + 0.6 = 0 \Rightarrow D = \frac{2.38}{6} = 0.397$

Equation 6: $-8.32 + 0.6 = 0 \Rightarrow D = 8.32$

Equation 7: $D = \frac{8.32}{6} = 1.396 \text{ ton}$

Equation 8: $(0.7)(3) + (6.24)(4) + (0.7)(5) + C(8) = 0$

Equation 9: $-2.1 - 24.96 - 3.5 + C(8) = 0 \Rightarrow C = \frac{30.56}{8} = 3.82$

Equation 10: $-30.56 + C(8) = 0 \Rightarrow C = 3.82 \text{ ton}$

Equation 11: $A = 3.82 + 0.48 = 4.3 \text{ ton}$

Equation 12: $B = 0.48 \text{ ton}$

Equation 13: $C = 3.82 + 0.664 = 4.484$

Equation 14: $D = 1.396 \text{ ton}$