

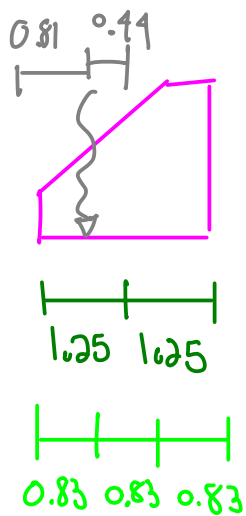
$$M_R = 15.55 \curvearrowright$$

$$M = F \cdot d$$

$$15.55 = 19.25 d$$

$$x = d = 0.81$$

$$e = \frac{b}{2} - x = \frac{2.50}{2} - 0.81 = 0.44 \text{ m}$$



∴ No está en el tercio medio.

Factores de Seguridad

Volteo

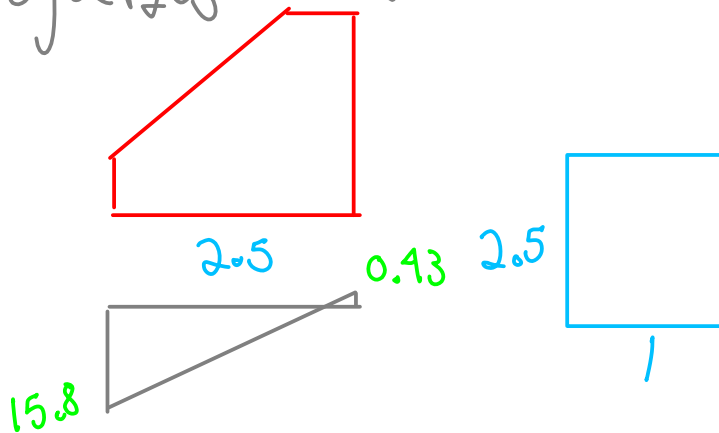
$$\frac{30.57}{15.02} = 2.03 > 1.5 \therefore \text{OK.}$$

Deslizamiento

$$F_{fr} = \mu N = 0.55 (19.25) = 10.59$$

$$\frac{10.59}{7.033} = 1.44 < 1.5 \therefore \text{No OK.}$$

Esfuerzos en el Suelo



$$\sigma_1 = \frac{P}{A} + \frac{Mc}{I} = \frac{P}{A} + \frac{Pec}{I} = \frac{19.25}{(2.5)(1)} + \frac{19.25(0.4)(\frac{2.5}{2})}{(\frac{1}{12} \cdot 1 \cdot 2.5^3)} = 15.8$$

$$\sigma_2 = \frac{P}{A} - \frac{Pec}{I} = -0.43$$

Esfuerzos en el suelo.

$$1.58 < 2 \text{ Kg/cm}^2 \therefore \checkmark$$

$$\frac{2}{1.58} = 1.26$$