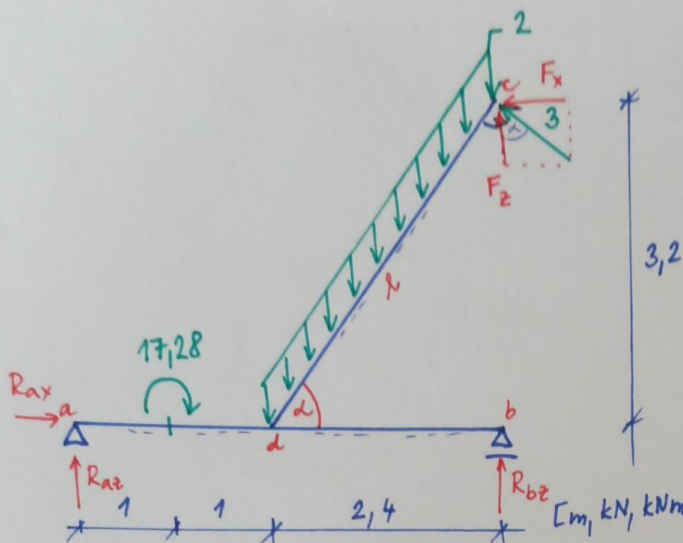




$$l = \sqrt{2.4^2 + 3.2^2} = 4 \text{ m}$$

$$\sin d = \frac{3.2}{4} = 0.8$$

$$\cos d = \frac{2.4}{4} = 0.6$$

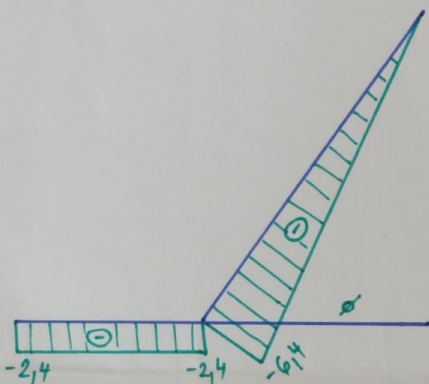
$$F_z = F \cdot \cos d = 3 \cdot 0.6 = 1.8 \text{ kN}$$

$$F_x = F \cdot \sin d = 3 \cdot 0.8 = 2.4 \text{ kN}$$

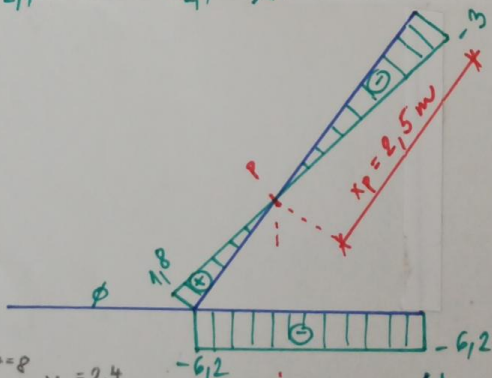
$$q = 2 \cdot \cos d = 2 \cdot 0.6 = 1.2 \text{ kN/m}$$

$$p = 2 \cdot \sin d = 2 \cdot 0.8 = 1.6 \text{ kN/m}$$

(N)



(V)



2.4 = 8

17.28 = M_{da}

M_{dc} = 2.4

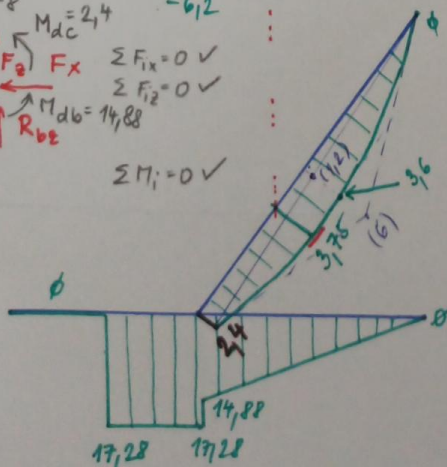
Σ F_{ix} = 0 ✓

Σ F_{iz} = 0 ✓

Σ M_i = 0 ✓

M_{db} = 14.88

R_{ax}, R_{az}, R_{bz}



REACTION:

$$\oplus \curvearrowright \Sigma M_{ia} = 0:$$

$$-17.28 - 2.4 \cdot (2 + 1.2) + F_z \cdot 4.4 + F_x \cdot 3.2 + R_{bz} \cdot 4.4 = 0$$

$$R_{bz} = \frac{17.28 + 2.4 \cdot 3.2 - 1.8 \cdot 4.4 - 2.4 \cdot 3.2}{4.4}$$

$$R_{bz} = 6.2 \text{ kN} (\uparrow)$$

$$\oplus \curvearrowright \Sigma M_{ib} = 0:$$

$$-R_{az} \cdot 4.4 - 17.28 + 2.4 \cdot 1.2 + F_x \cdot 3.2 = 0$$

$$R_{az} = \frac{-17.28 + 2.4 \cdot 1.2 + 2.4 \cdot 3.2}{4.4}$$

$$R_{az} = 0$$

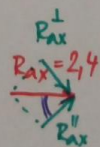
$$\oplus \rightarrow \Sigma F_{ix} = 0: R_{ax} - F_x = 0$$

$$R_{ax} = F_x = 2.4 \text{ kN} (\leftarrow)$$

$$\text{KO: } \Sigma F_{iz} = 0 \downarrow \oplus$$

$$-R_{az} - R_{bz} - F_z + 2.4 = 0$$

$$-0 - 6.2 - 1.8 + 8 = 0 \checkmark$$



$$R_{ax}'' = R_{ax} \cdot \cos d = 1.44 \text{ kN}$$

$$R_{ax}' = R_{ax} \cdot \sin d = 1.92 \text{ kN}$$

$$R_{bz}' = R_{bz} \cdot \cos d = 3.72 \text{ kN}$$

$$R_{bz}'' = R_{bz} \cdot \sin d = 4.96 \text{ kN}$$

$$M_p^P = 3 \cdot x_p - q \cdot x_p \cdot \frac{x_p}{2} = 3 \cdot 2.5 - 1.2 \cdot \frac{2.5^2}{2}$$

$$M_p^P = 3.75 \text{ kNm}$$

$$\text{nebo: } M_c = M_p + \int_p^c V dx$$

$$M_p = M_c - \int_p^c V dx = 0 - \frac{1}{2} \cdot (-3) \cdot 2.5$$

$$M_p = 3.75 \text{ kNm}$$

$$f = \frac{1}{8} \cdot 1.2 \cdot 4^2 = 2.4 \text{ kNm}$$