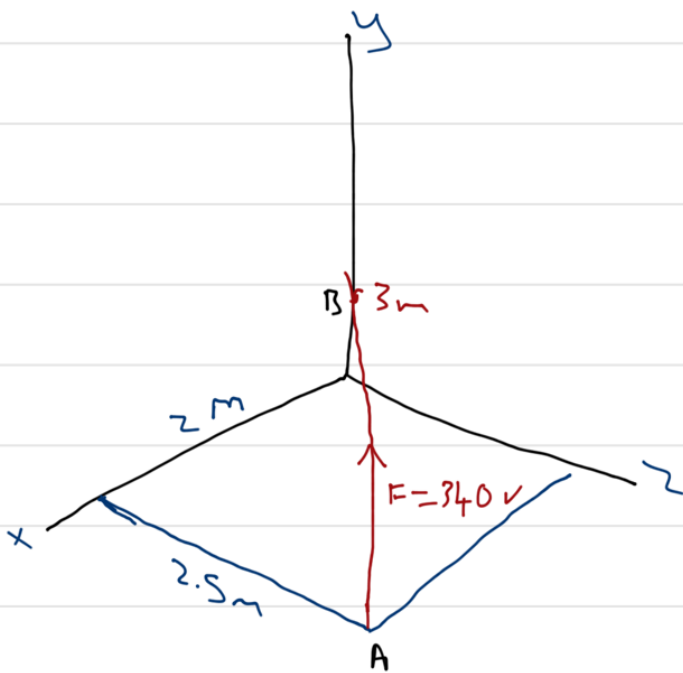




$$Y_{ab} = (0-2)\underline{i} + (0-2.5)\underline{j} + (3-0)\underline{k}$$

$$Y_{ab} = -2\underline{i} - 2.5\underline{j} + 3\underline{k}$$

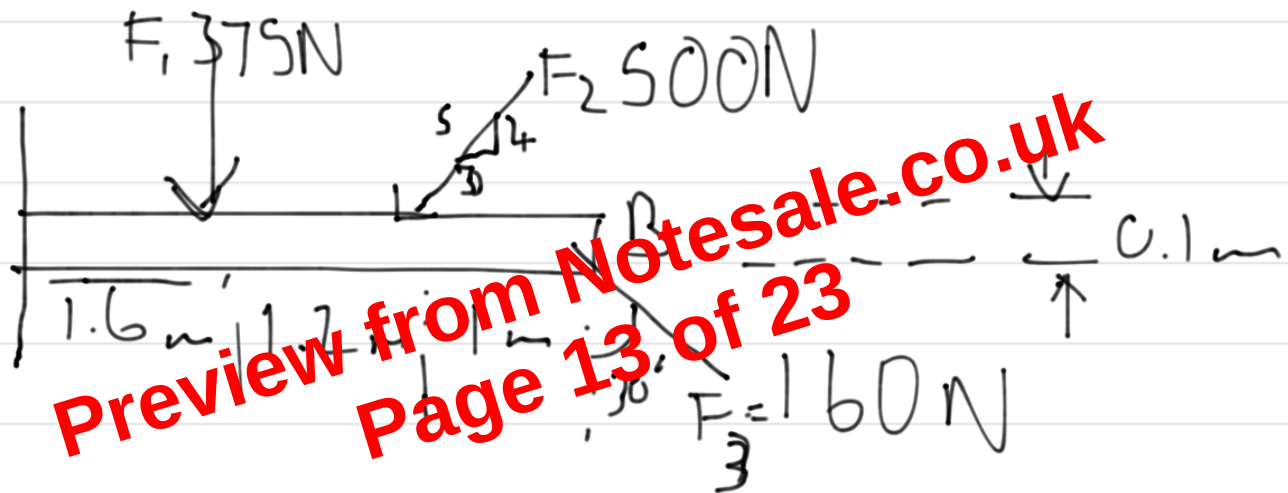
$$|Y_{ab}| = \sqrt{4 + 6.25 + 9} = 4.39 \text{ m}$$

$$340 \left(\underline{U}_{ab} \right) = 340 \left(\frac{-2\underline{i} - 2.5\underline{j} + 3\underline{k}}{4.39 \text{ m}} \right) = \underline{F} =$$

$$\left\{ -154.9\underline{i} - 193.62\underline{j} + 232.35\underline{k} \right\} \text{ N}$$

$$M_A = -35 \cos 30 (0.2) - 20(0.6) + 25(0.3) = -10.56$$

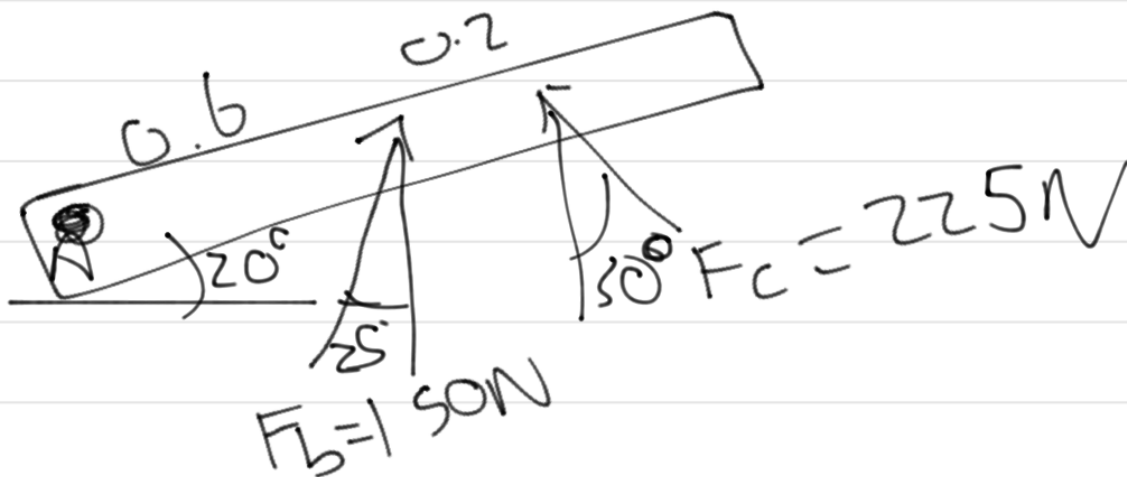
$$d = \frac{M_r}{F_{ry}} = \frac{10.56}{50.31} = 0.209 \text{ m}$$



$$M_1 = 375 (2.2) = 825 \text{ Nm}$$

$$m_2 = 500 \left(\frac{4}{5} \right) (1) = 400 \text{ Nm}$$

$$m_3 = 160 \sin 30 (0.1) = 8 \text{ Nm}$$



$$M_a = 150 \cos 25 (0.6)$$

$$+ 225 \cos 30 (0.8)$$

$$= 237.5 \text{ Nm}$$

Preview from Notesale.co.uk
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