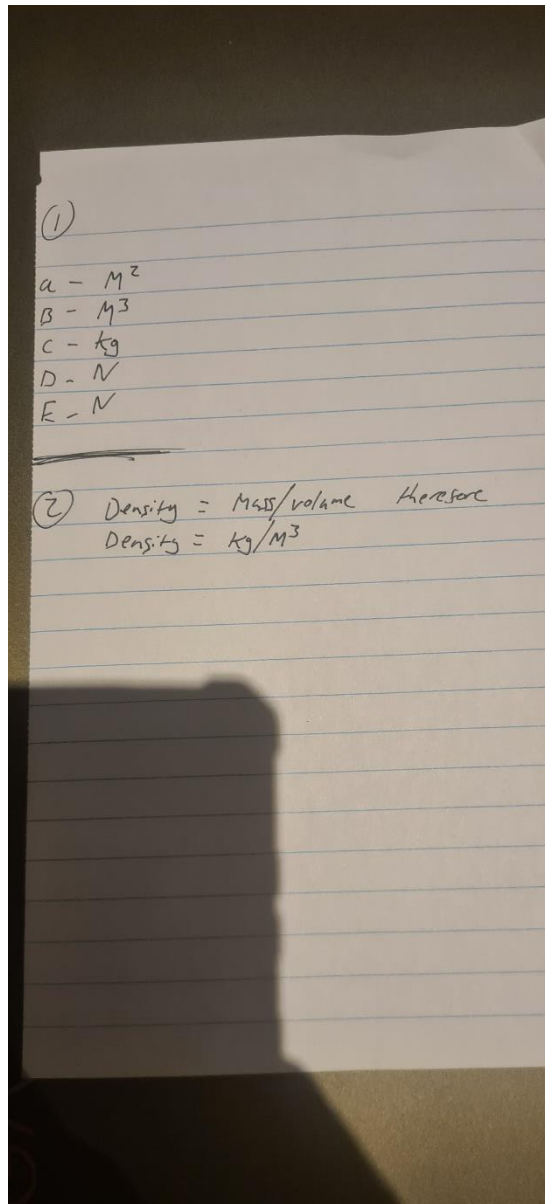
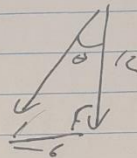
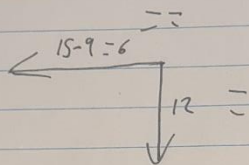
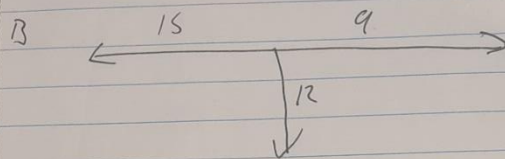




(3)

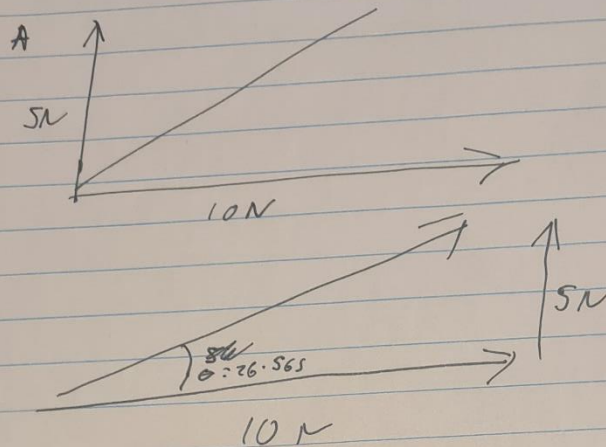


$$\sqrt{12^2 + 6^2} = \sqrt{F^2} = 13.416N$$

~~$\tan^{-1}(12/6)$~~ $\tan^{-1}(6/12) = 26.565^\circ$

B = a force of 13.416N South ~~at~~ West
at a bearing of ~~26.565^\circ~~ 216.565°

(3)

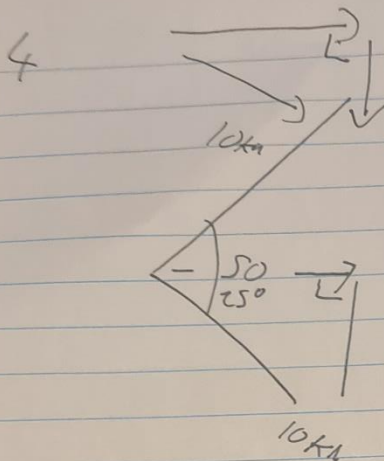
 ~~5 N~~

$$40 - 11.18 =$$

~~26.565~~ $\tan^{-1}(5/10) = \theta = 26.565$

$$\sqrt{10^2 + 5^2} = \sqrt{F^2} = F = 11.18\text{ N}$$

A = A Force of 11.18 N at Northeast
at a bearing of 26.565°



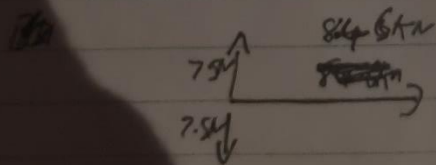
$$\sin 25 = \frac{20}{10} = 0.423 = \frac{20}{10}$$

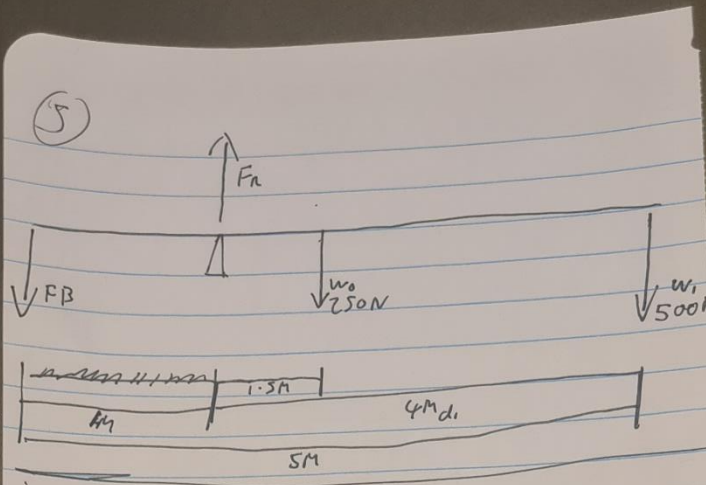
~~4.23~~
4.23

$$4.23 \times 2 = 84.6 \text{ kN}$$

$$10^2 + 84.6^2 =$$

$$A = \cancel{84.6 \text{ kN}} \quad 8.4 \text{ kN}$$





$$A = (w_0 d_0) + (w_1 d_1) =$$

$$(250 \times 1.5) + (500 \times 4) = 2375 \text{ Nm}$$

Moment at Bolts anti-clockwise $\Rightarrow$ Clockwise moments

$$-2375 \text{ Nm} - 2375 \text{ N} = F_B$$

$$B = (250 \times 1.5) + (500 \times 5) =$$

$$625 + 2500 = 3125 \text{ N} = F_B$$

(C)

A = Conventional direction (A)

B =

$$R_1 + \left(\frac{1}{\frac{1}{R_2} + \frac{1}{R_3}} \right) + R_4 = 5 \Omega$$

$$C = I = V/R = 12/5 = 2.4 \text{ A}$$

$$D = V = IR = 7.2 \text{ V}$$

$$E = R_3$$