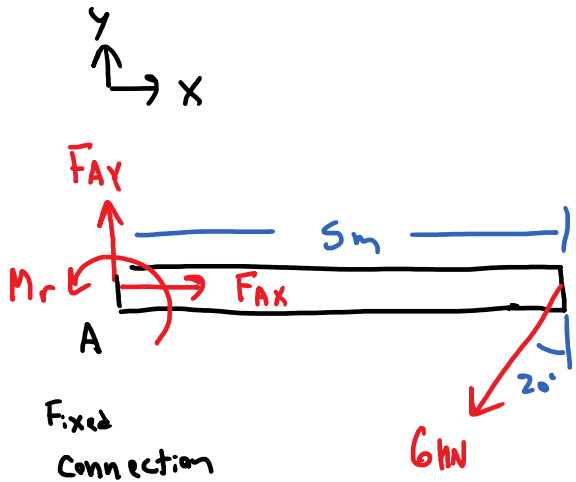
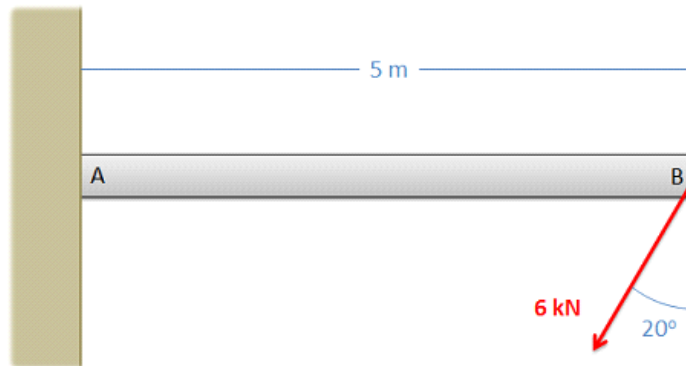


Question 2

A 5 meter long beam has a fixed connection to a wall at point A and a force acting as shown at point B. What are the reaction forces acting on the beam at point A?



$$\sum F_x = F_{Ax} - 6 \sin(20) = 0$$

$$\sum F_y = F_{Ay} - 6 \cos(20) = 0$$

$$\sum M_A = M_r - (5)(6 \cos(20)) = 0$$

$$F_{Ax} = 6 \sin(20) = \boxed{2.05 \text{ kN}}$$

$$F_{Ay} = 6 \cos(20) = \boxed{5.64 \text{ kN}}$$

$$M_r = (5)(6) \cos(20) = \boxed{28.19 \text{ kNm}}$$