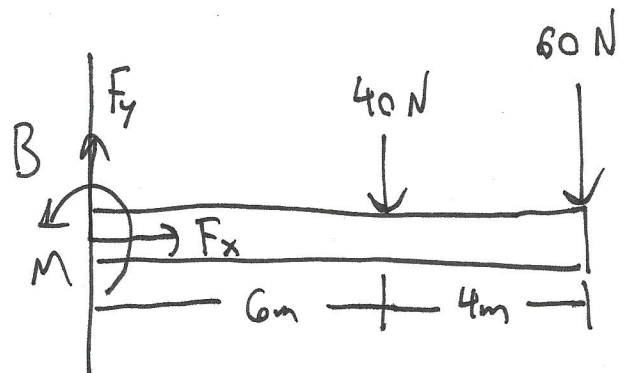
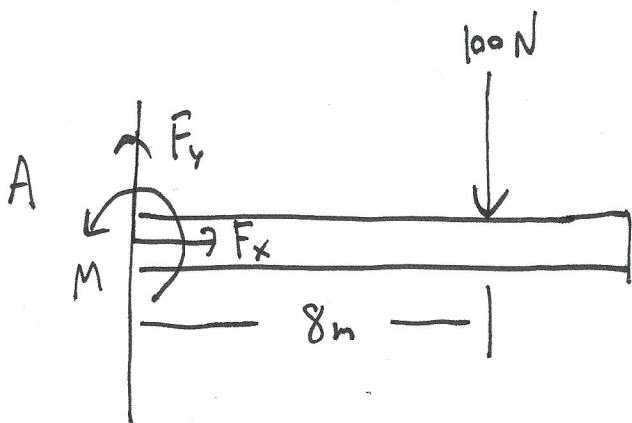
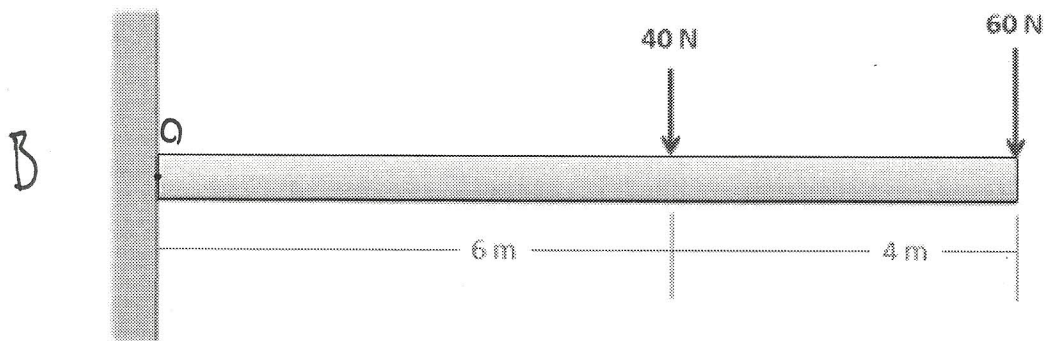
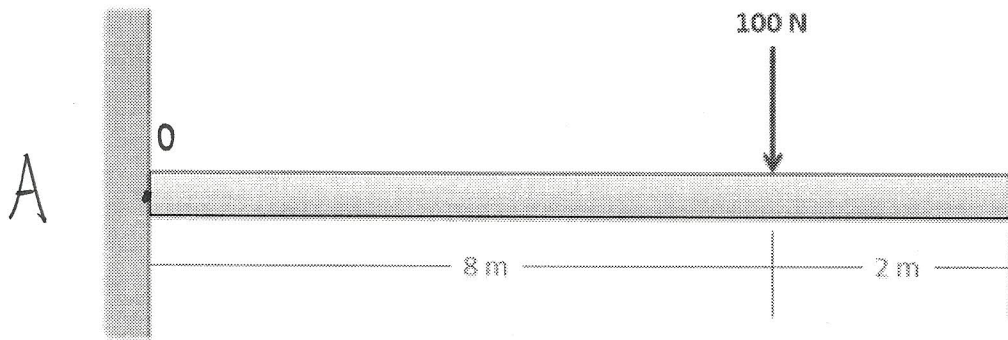


Question 1:

Determine if the two sets of forces shown below are statically equivalent.



A

$$\sum F_x = F_x = 0$$

$$\sum F_y = F_y - 100 = 0$$

$$\sum M_o = M - (100)(8) = 0$$

$$F_x = 0$$

$$F_y = 100 \text{ N}$$

$$M = 800 \text{ Nm}$$

$$M_A \neq M_B$$

B

$$\sum F_x = F_x = 0$$

$$\sum F_y = F_y - 40 - 60 = 0$$

$$\sum M_o = M - (40)(6) - (60)(10)$$

$$F_x = 0$$

$$F_y = 100 \text{ N}$$

$$M = 840 \text{ Nm}$$

The two sets of forces are not statically equivalent