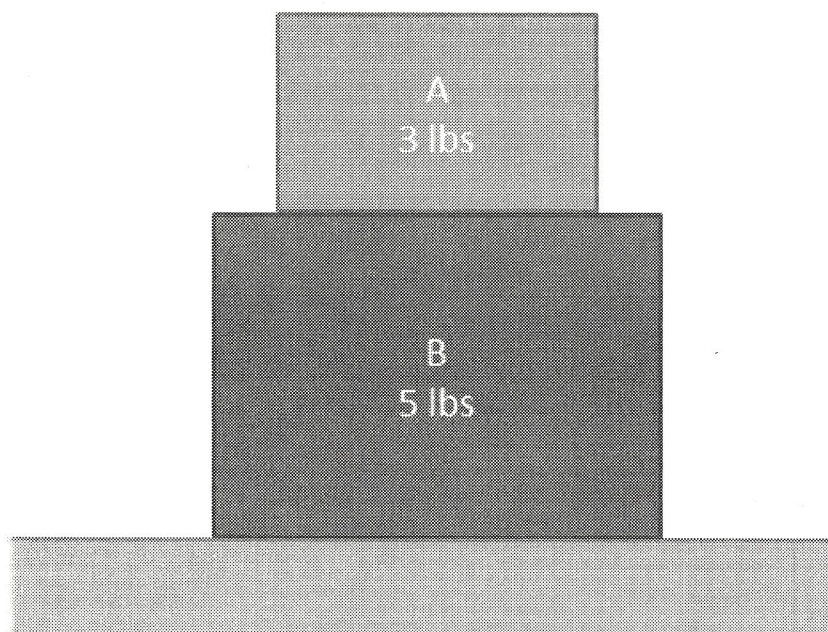
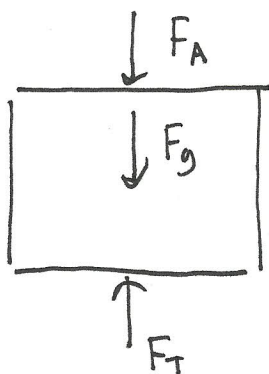


### Question 1:

The diagram below shows a 3lb box (Box A) sitting on top of a 5lb box (box B). Determine the magnitude and direction of all the forces acting on box B.



Calculations:



$$F_A = 3 \text{ lbs}$$

$$F_g = 5 \text{ lbs}$$

$$\sum F_y = F_T - F_A - F_g = 0$$

$$F_T - 3 - 5 = 0$$

$$F_T = 8 \text{ lbs}$$

Solutions:

$$F_A = 3 \text{ lbs}$$

$$F_g = 5 \text{ lbs}$$

$$F_T = 8 \text{ lbs}$$

