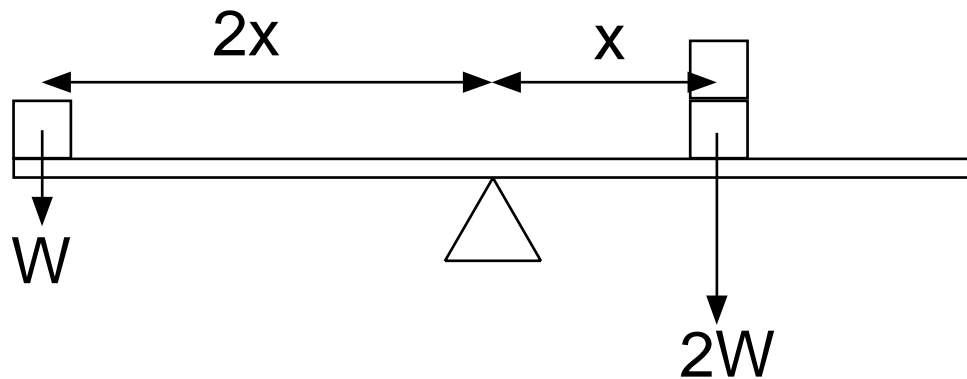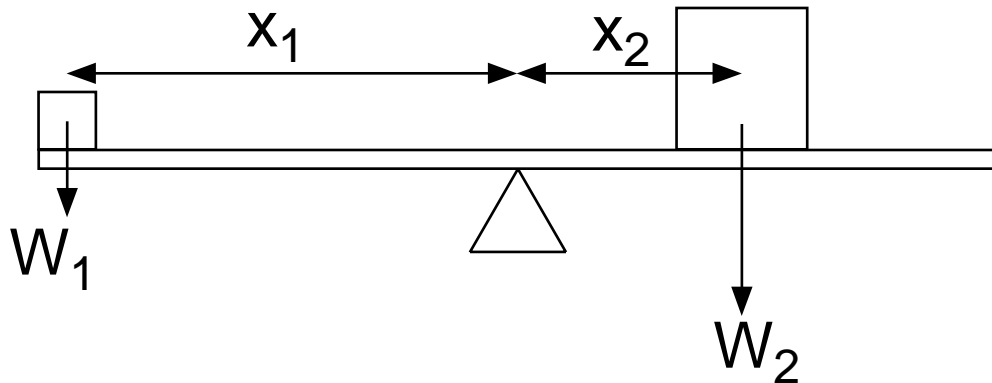# Balance

$$W \cdot 2x = 2W \cdot x$$

$$W_1 \cdot x_1 = W_2 \cdot x_2$$

$$x_1 = \frac{W_2}{W_1} x_2$$

The weights must be positioned to keep the center of mass directly above the pivot point (or fulcrum)