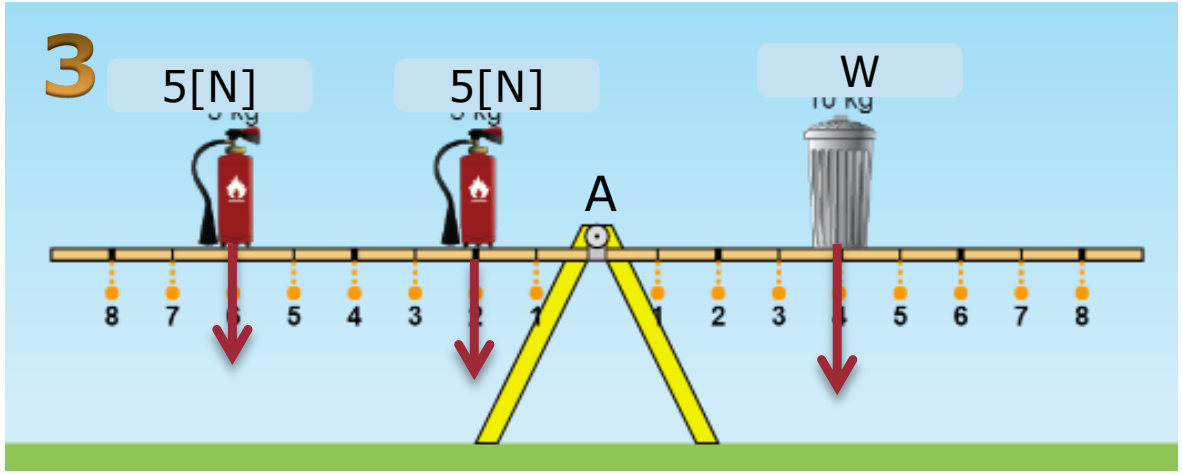
SEGUNDA CONDICIÓN DE EQUILIBRIO

$$\Sigma \tau_A = 0$$

EJEMPLO

Hallar el peso "W" para que el sistema esté en equilibrio.



$$W = \frac{40[Ncm]}{4[cm]}$$

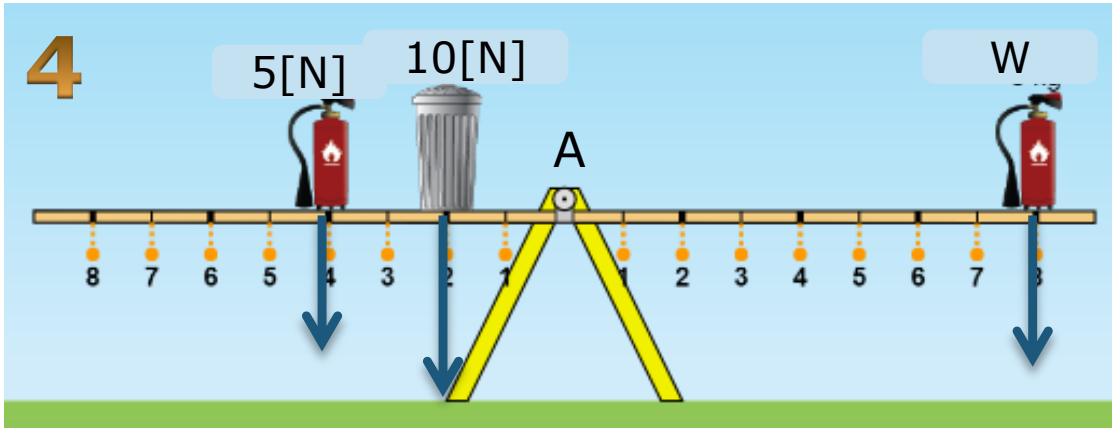
$$W = 10[N]$$

$$\Sigma \tau_A = 5[N]\,6[m] + 5[N]\,2[cm] - W\,4[cm] = 0$$

$$30[Nm] + 10[Ncm] - 4[cm]\,W = 0 \qquad 40[Nm] - 4[cm]\,W = 0$$

EJEMPLO

Hallar el peso "W" para que el sistema esté en equilibrio.



$$\Sigma \tau_A = 5[N]\,4[m] + 10[N]\,2[cm] - W\,8[cm] = 0$$

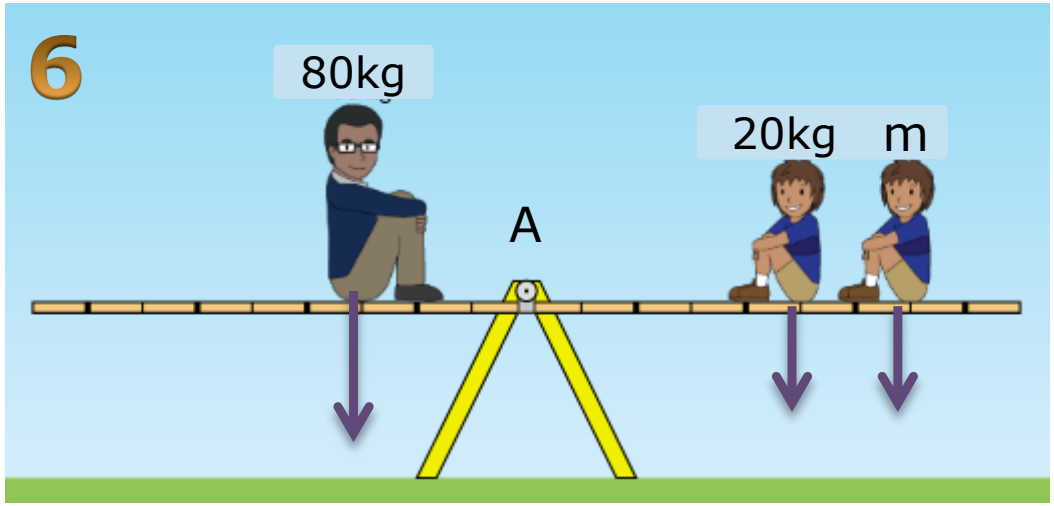
$$20[Nm] + 20[Ncm] - 8[cm]\,W = 0 \qquad 40[Nm] - 8[cm]\,W = 0$$

$$W = \frac{40[Ncm]}{8[cm]}$$

$$W = 5[N]$$

EJEMPLO

Hallar el masa "m" para que el sistema esté en equilibrio.



$$\Sigma \tau_A = 80\,[kg]\,3\,[m] - 20\,[kg]\,5\,[m] - m.7\,[m] = 0$$

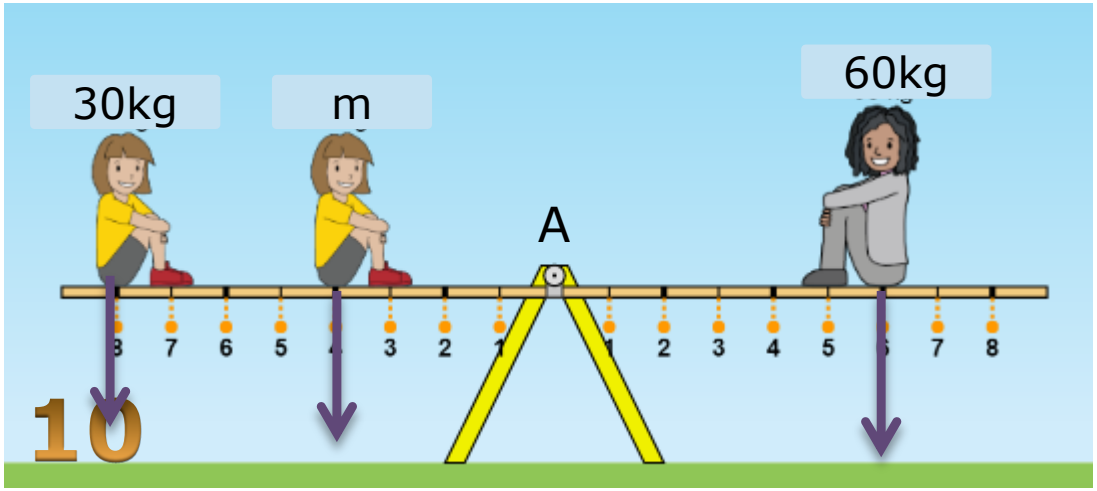
$$240[kg\,m] - 100[kg\,m] - 7\,[m]\,m = 0 \qquad 140[Nm] - 7\,[m]\,m = 0$$

$$m = \frac{140\,[kg\,m]}{7\,[m]}$$

$$m = 20\,[kg]$$

EJEMPLO

Hallar el peso "W" para que el sistema esté en equilibrio.



$$\Sigma \tau_A = 30\,[kg]\,8\,[m] + m.\,4\,[m] - 60[kg]\,6\,[m] = 0$$

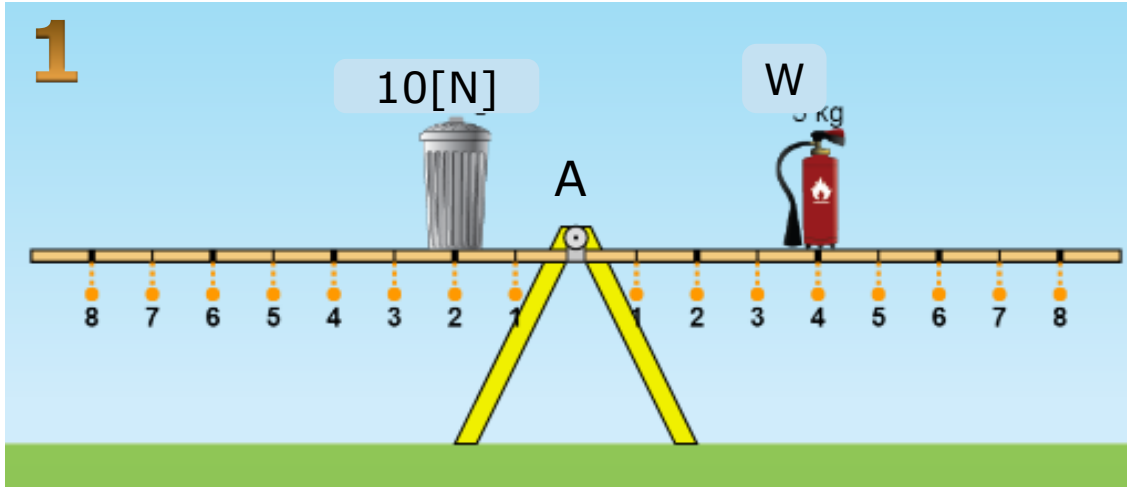
$$240[kg\,m] + m.4[m] - 360\,[kg\,m] = 0 \qquad -120[kg\,m] + 4\,[m]\,m = 0$$

$$m = \frac{120\,[kg\,m]}{4\,[m]}$$

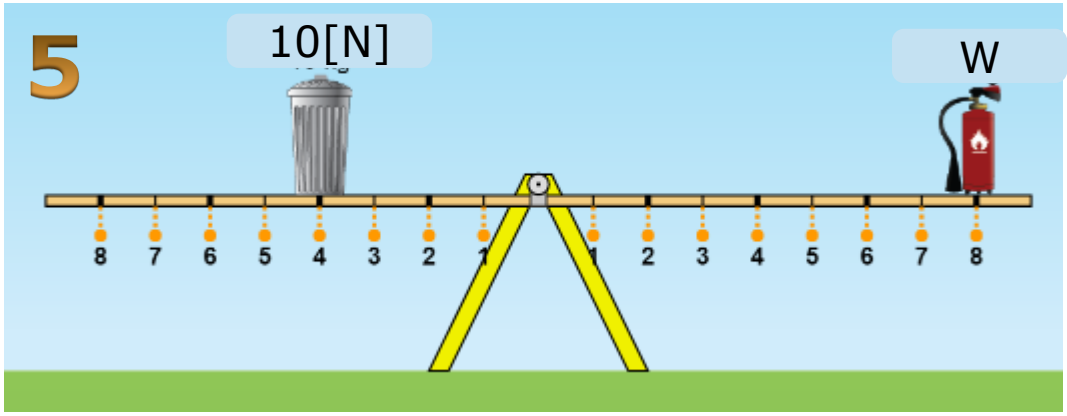
$$m = 30\,[kg]$$

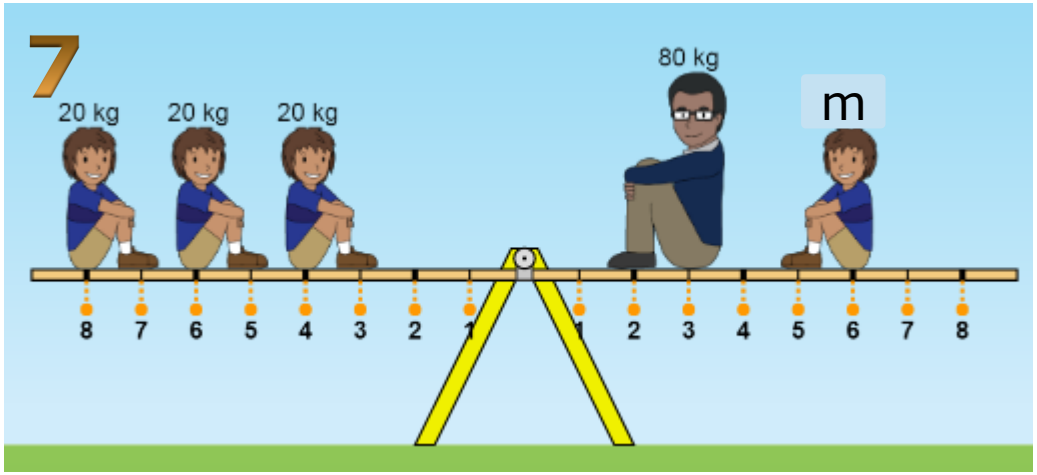
EJEMPLO

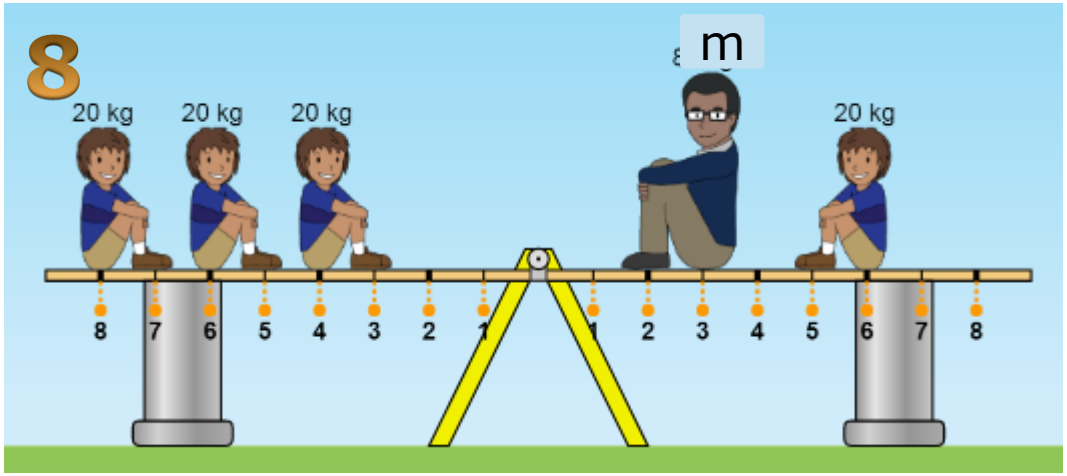
Hallar el peso "W" para que el sistema esté en equilibrio.



5

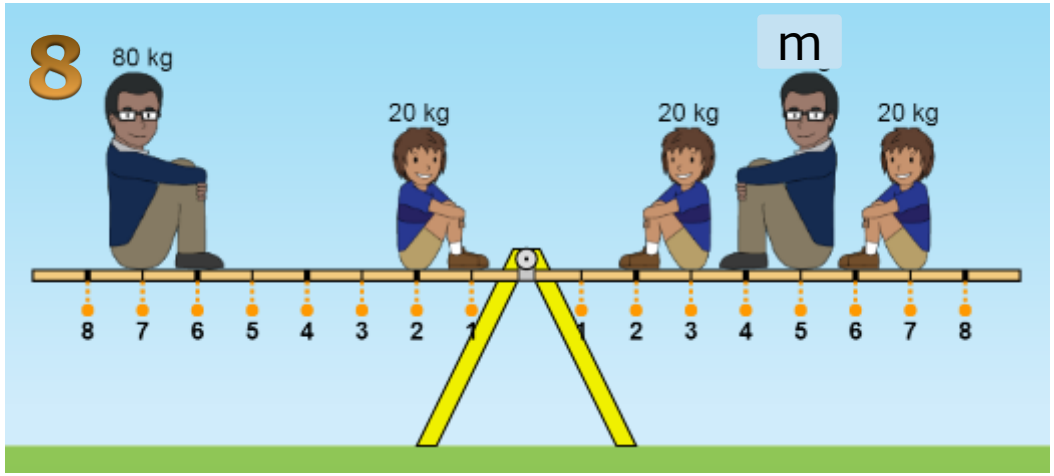


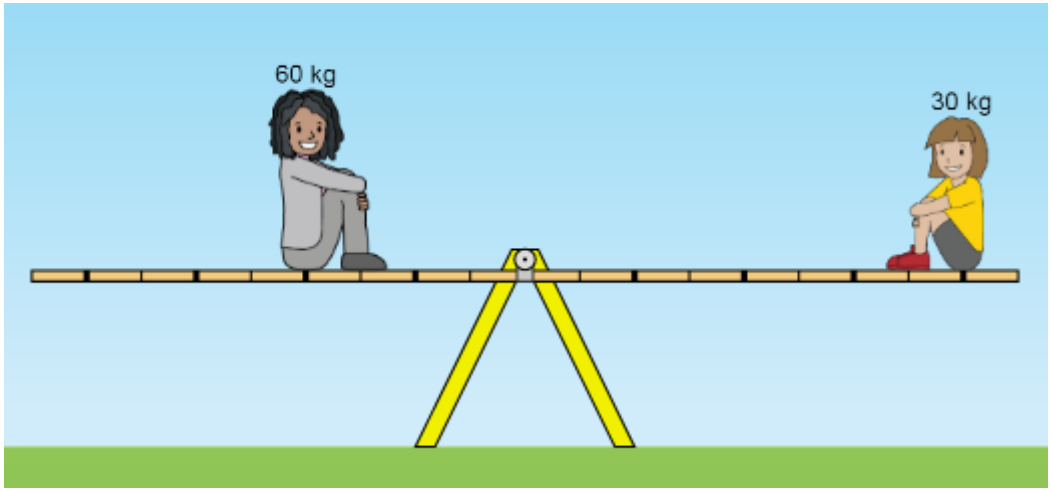

7
20 kg
20 kg
20 kg
80 kg
m
8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8

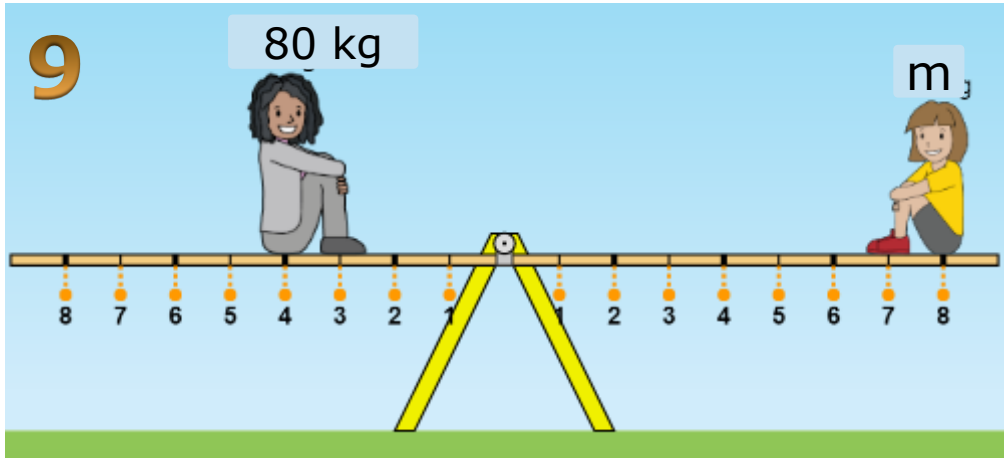

8
20 kg
20 kg
20 kg
m
20 kg
8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8

EJEMPLO

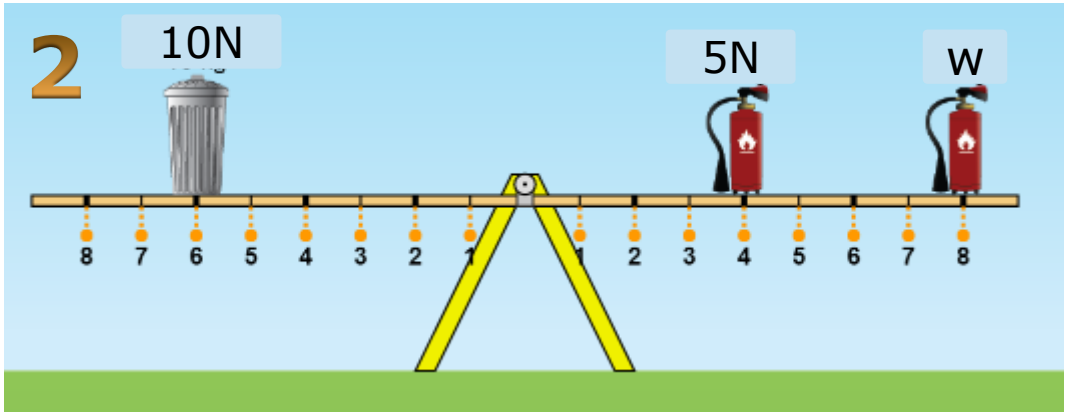
Hallar el mas "m" para que el sistema esté en equilibrio.




60 kg
30 kg


9
80 kg
m
8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8

2



2

FIN

JORGE CABRERA