Your weight on Jupiter

If your weight was 200 *lbs* (91 *kg*) on earth, what would your weigh be on Jupiter?

Jupiter: $m_{jupiter} = 1.9 \text{ x } 10^{27}\ kg$ & $r_{jupiter} = 6.99 \text{ x } 10^{7}\ m$

$$g_{jupiter} = \frac{Gm_{jupiter}}{(r_{jupiter})^2}$$

$$g_{jupiter} = \frac{(6.67 \text{ x } 10^{-11}\ \text{N}\ m^2\ /\ kg^2)(1.9 \text{ x } 10^{27}\ kg)}{(6.99 \text{ x } 10^{7}\ m)^2}$$

$$g_{jupiter} = 25.9 \frac{m}{s^2}$$ *2.6 times that of the earth*

Thus, your weight on Jupiter would be:

$$W_{jupiter} = mg_{jupiter}$$

$$W_{jupiter} = (91kg)\left(25.9 \frac{m}{s^2}\right)$$

$W_{jupiter} \approx 2357\ \text{N}$ (~ 530 *lbs*)