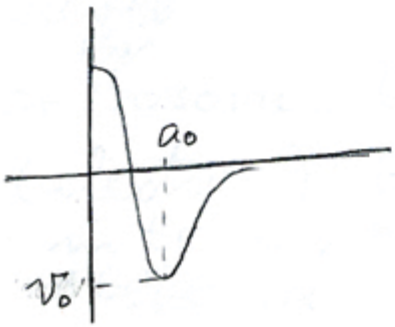
$$Q = \frac{\hbar^2}{m a_0} \frac{1}{|V_0|}$$

$$Q = \frac{\hbar^2}{m R^2} \frac{1}{|V_0|}$$

$|V_{nd}| \approx 1\,\text{MeV}$ $\qquad \frac{\hbar^2}{m} = 40\,\text{MeV fm}^2$

$R \approx 7\,\text{fm}$

$$Q = \frac{40\,\text{MeV}\,\cancel{\text{fm}^2}}{50\,\cancel{\text{fm}^2}} \frac{1}{1\,\text{MeV}} \approx 0.8$$



$$Q = \frac{\hbar^2}{m a_0^2} \frac{1}{|V_0|} \qquad a_0 = 1\,\text{fm}$$

$V_0 = -100\,\text{MeV}$

$$Q = \frac{40\,\cancel{\text{MeV}}\,\cancel{\text{fm}^2}}{1\,\cancel{\text{fm}^2}} \frac{1}{100\,\cancel{\text{MeV}}} \approx 0.4$$