

$$\text{In[11]:= } V[r_] := \frac{-4}{3} * (\text{Quantity}[200, \text{"Megaelectronvolts"} * \text{"Femtometers"}]) * \frac{0.3}{r} + \text{Quantity}\left[1, \frac{\text{"Gigaelectronvolts"}}{\text{"Femtometers"}}\right] * r$$

In[12]:= **Solve**[V[r] == 0, r]

Solve::ratnz : Solve was unable to solve the system with inexact coefficients. The answer was obtained by solving a corresponding exact system and numericizing the result. >>

$$\text{Out[12]= } \left\{ \left\{ r \rightarrow -2.82843 \times 10^{-16} \text{ m} \right\}, \left\{ r \rightarrow 2.82843 \times 10^{-16} \text{ m} \right\} \right\}$$

$$\text{In[19]:= } \alpha_s[Q^2_] := \frac{0.118}{1 + \frac{33-2*5}{12*\pi} * 0.118 * \text{Log}\left[\frac{Q^2}{\text{Quantity}\left[91, \left(\frac{\text{"Gigaelectronvolts"}}{\text{"SpeedOfLight"}}\right)^2\right]}\right]}$$

In[22]:= **Solve**[\alpha_s[Q^2] == 1, Q^2]

$$\text{Out[22]= } \left\{ \left\{ Q^2 \rightarrow 1.24181 \times 10^{-40} \text{ kg}^2\text{m}^2/\text{s}^2 \right\} \right\}$$