Planck Scale

Planck's constant (quantum mechanics): $\hbar$

Speed of light (special relativity): c

Universal gravitation constant: G

$$m_{Pl} = \sqrt{\frac{\hbar c}{G}} = 0.02 \text{ mg}$$

$$E_{Pl} = m_{Pl} c^2 = \sqrt{\frac{\hbar c^5}{G}} = 10^{19} \text{ GeV}$$

$$l_{Pl} = \frac{\hbar}{m_{pl} c} = \sqrt{\frac{\hbar c}{G}} = 10^{-35} \text{ m}$$

$$t_{Pl} = \frac{l_{Pl}}{c} = \sqrt{\frac{G\hbar}{c^5}} = 10^{-43} \text{ s}$$