

20-P-FA-AF-007

Newton's Law of Motion / Eqⁿ of Motion

Q: If an object weighs E 'N' on earth and weighs P 'N' on an unknown planet. What is the mass of the object and the acceleration on this unknown planet?

- use 9.81 m/s^2 for gravity on earth -

A:
$$W_E = E = mg \quad \Rightarrow \quad m = E/g$$

 $g = 9.81$

$$W_P = P = ma \quad \Rightarrow \quad a = P/m = Pg/E$$