

- 1 Recall the equation for weight, gravitational field strength, and mass
- 2 What is the unit for a) weight b) gravitational field strength c) mass
- 3 What is the gravitational field strength on Earth?
- 4 A rock with a mass of 2kg is taken from Earth to The Moon. Does its mass or weight change?
- 5 If the gravitational field strength acting on an object increases, it's weight will _____.
- 6 If the gravitational field strength acting on an object decreases, it's weight will _____.
- 7 Calculate the weight of an astronaut on Earth who has mass of 72 kg.
- 8 The same astronaut travels to Mars ($g = 3.7 \text{ N/kg}$). Calculate their new weight on Mars.
- 9 The same astronaut travels to The Moon. Their weight on The Moon is 115.2 N.
Calculate the gravitational field strength (g) on The Moon.
- 10 The astronaut wore a 50g necklace on their journey from Earth to Mars and to The Moon.
Calculate the weight of the necklace on each planet **a) Earth b) Mars c) The Moon**
- 11 Calculate the weight of an object on Earth with a mass of 70 kg
- 12 Calculate the weight of an object on Earth with a mass of 0.2 kg
- 13 Calculate the weight of an object on Earth with a mass of 90,000 g
- 14 Calculate the weight of an object on Earth with a mass of $5 \times 10^6 \text{ g}$
- 15 Calculate the mass in kilograms of an object on Earth with a weight of 900 N
- 16 Calculate the mass in kilograms of an object on Mars with a weight of 900 N
- 17 Calculate the mass kilograms of an object on The Moon with a weight of 900 N
- 19 Calculate the weight of an object on Mars with a mass of 70 kg
- 20 Calculate the weight of an object on The Moon with a mass of 0.2 kg
- 21 Calculate the weight of an object on The Moon with a mass of 0.1 g
- 22 Calculate the mass in grams of an object on Mars with a weight of 900 kN
- 23 Calculate the mass in grams of an object on The Moon with a weight of 0.2 kN
- 24 Calculate the mass in grams of an object on Mars with a weight of 80 kN