

SPACE Maths Word Problems – Upper Key Stage 2 – Year 5

1. There are 243 planets in one galaxy, 879 planets in another, and 1,205 planets in a third galaxy. How many planets are there in total across all three galaxies?
2. A space shuttle travels 1,250km to reach the Moon. After 950km, the astronauts take a break. How many more kilometres do they need to travel to reach the Moon?
3. A space observatory can observe 6 stars each night. How many stars will it observe in 15 nights?
4. A group of astronauts has 500 litres of water for their journey. If each astronaut gets 5 litres per day, how many days will the water last for one astronaut?
5. On a mission, $\frac{3}{4}$ of the spaceship's food supply has been used. If they had 800 kg of food at the start, how much food remains?
6. A spacecraft travels at 29.6 km per second. How far will it travel in 10 seconds?
7. A rocket is 75.5 metres tall. Another rocket is 25.8 metres shorter. How tall is the second rocket?
8. It takes 18 hours for a space probe to orbit a planet. How many orbits will the probe complete in 3 days?
9. A space station has a square-shaped landing pad that measures 20 metres on each side. What is the area of the landing pad?
10. A rectangular spaceship window is 15 metres long and 10 metres wide. What is the perimeter of the window?

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MARK SCHEME

1. There are 243 planets in one galaxy, 879 planets in another, and 1,205 planets in a third galaxy. How many planets are there in total across all three galaxies?

$$243 + 879 + 1,205 = 2,327 \text{ planets.}$$

2. A space shuttle travels 1,250 km to reach the Moon. After 950 km, the astronauts take a break. How many more kilometres do they need to travel to reach the Moon?

$$1,250 - 950 = 300 \text{ km left to travel.}$$

3. A space observatory can observe 6 stars each night. How many stars will it observe in 15 nights?

$$6 \times 15 = 90 \text{ stars.}$$

4. A group of astronauts has 500 litres of water for their journey. If each astronaut gets 5 litres per day, how many days will the water last for one astronaut?

$$500 \div 5 = 100 \text{ days.}$$

5. On a mission, $\frac{3}{4}$ of the spaceship's food supply has been used. If they had 800 kg of food at the start, how much food remains?

$$\text{Food used: } 34 \times 800 = 600 \text{ kg}$$

$$\text{Food remaining: } 800 - 600 = 200 \text{ kg}$$

6. A spacecraft travels at 29.6 km per second. How far will it travel in 10 seconds?

$$29.6 \times 10 = 296 \text{ km.}$$

7. A rocket is 75.5 metres tall. Another rocket is 25.8 metres shorter. How tall is the second rocket?

$$75.5 - 25.8 = 49.7 \text{ metres.}$$

8. It takes 18 hours for a space probe to orbit a planet. How many orbits will the probe complete in 3 days?

$$3 \text{ days} = 3 \times 24 = 72 \text{ hours.}$$

$$\text{Number of orbits: } 72 \div 18 = 4 \text{ orbits.}$$

9. A space station has a square-shaped landing pad that measures 20 metres on each side. What is the area of the landing pad?

$$\text{Area} = 20 \times 20 = 400 \text{ m}^2.$$

10. A rectangular spaceship window is 15 metres long and 10 metres wide. What is the perimeter of the window?

$$\text{Perimeter} = 2 \times (15+10) = 2 \times 25 = 50 \text{ metres.}$$