

- 1 (a) Write 1.2×10^5 as an ordinary number. (1)
(b) Write 0.003 in standard form. (1)

(2 marks)

- 2 (a) Write 42 900 000 in standard form. (1)
(b) Write 3.61×10^{-3} as an ordinary number. (1)

(2 marks)

- 3 (a) Write 9.516×10^6 as an ordinary number. (1)
(b) Write 0.0724 in standard form. (1)
(c) Calculate $(8.694 \times 10^2) \div (6.21 \times 10^{-3})$
Give your answer in standard form. (2)

(4 marks)

- 4 (a) Write 5.12×10^{-5} as an ordinary number. (1)
(b) Write 5 600 000 in standard form. (1)

(2 marks)

- 5 (a) Write 0.0065 in standard form. (1)
(b) Write 3×10^4 as an ordinary number. (1)

(2 marks)

- 6 (a) Write 3.08×10^{-5} as an ordinary number. (1)
(b) Write 5 million in standard form. (1)
(c) Calculate $(6.3 \times 10^5) \times (2.5 \times 10^{-2})$
Give your answer in standard form. (2)

(4 marks)

- 7 Work out $(8.69 \times 10^{-5}) \div (5.5 \times 10^{-7})$
Give your answer in standard form.

(2 marks)

- 8 (a) Write 0.00931 in standard form. (1)
(b) Write 7.429×10^3 as an ordinary number. (1)

(2 marks)

- 9 (a) Write 5.2×10^{-1} as an ordinary number. (1)
(b) Work out the value of $(3.2 \times 10^3) \times (6.5 \times 10^4)$
Give your answer in standard form. (2)

(3 marks)

- 10 Write 0.21×10^6 in standard form.

(1 mark)

- 11 Work out $(6.7 \times 10^4) \times (3.4 \times 10^{-8})$
Give your answer as an ordinary number.

(2 marks)

- 12 Work out $\frac{0.03 \times 0.02}{0.008}$

Give your answer in standard form.

(3 marks)

- 13 Work out $\frac{3.744 \times 10^9}{2.4 \times 10^5}$

Give your answer in standard form.

(2 marks)

- 14 Work out the value of $(5 \times 10^3) \times (6 \times 10^7)$
Give your answer in standard form.

(2 marks)

- 15 (a) Write 0.000 054 376 in standard form. (1)
(b) Write 4.15×10^6 as an ordinary number. (1)
(c) Work out $\frac{4.1 \times 10^5 \times 7.3 \times 10^4}{2 \times 10^{-6}}$ (2)

(4 marks)

- 16 Write these numbers in order of size.
Start with the smallest number.

$$6.1 \times 10^2 \quad 0.061 \times 10^2 \quad 6100 \times 10^{-4} \quad 61$$

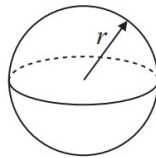
(2 marks)

- 17 A sphere has a radius of 6.4×10^6 metres.
Calculate the volume of this sphere.

Give your answer in standard form to
1 decimal place.

$$\text{Volume of sphere} = \frac{4}{3}\pi r^3$$

$$\text{Surface area of sphere} = 4\pi r^2$$



(3 marks)

- 18 A large rock has a weight of 1.2×10^4 grams.
Find, in standard form, the weight of 12 of these large rocks.

(2 marks)

- 19 Write these numbers in order of size.
Start with the smallest number.

$$3.5 \times 10^2 \quad 0.035 \times 10^5 \quad 350 \times 10^{-2} \quad 35 \times 10^0$$

(2 marks)

- 20 The diameter of Neptune is 5.0×10^4 km
The diameter of Mars is 6.8×10^3 km
Calculate the difference between the diameter of Neptune and the
diameter of Mars.
Give your answer in standard form.

(2 marks)

- 21 One electron has a mass of 9.1×10^{-31} grams.
Find the mass of 250 of electrons.

(2 marks)

- 22 The area of Australia is 7.7×10^6 km²
The area of Cyprus is 9.3×10^3 km²
How many times larger is Australia than Cyprus.
Give your answer to the nearest whole number.

(2 marks)

- 23 The area of the Pacific Ocean is 3.61×10^8 km²
The area of the Atlantic Ocean is 8.51×10^7 km²
Find the total area of the Pacific Ocean and the Atlantic Ocean.
Give your answer in standard form.

(2 marks)

- 24 The distance between Earth and Mars is 78 million kilometres.
The speed of light is 3×10^5 km/s
Calculate the time, in seconds, it takes for light to travel from Earth to
Mars.
Give your answer in standard form.

(2 marks)