

- 1 Write 0.00273 in standard form.

..... [1]

[Total: 1]

- 2 The table shows the population and area of three countries in 2020.

Country	Population	Area (km ²)
Nigeria	2.06×10^8	9.11×10^5
Comoros	8.70×10^5	1.86×10^3
Vietnam	9.73×10^7	3.10×10^5

- (a) Calculate the difference in population between Nigeria and Vietnam.

..... [1]

- (b) Which of Comoros or Vietnam has the greater population density?
You must show all your working.

$$\left[\text{Population density} = \frac{\text{population}}{\text{area (km}^2\text{)}} \right]$$

..... [3]

[Total: 4]

- 3 Write the ratio $5 \times 10^{-1} : 2 : 3 \times 10^1$ in its simplest form.

..... : : [2]

[Total: 2]

- 4 Calculate $4.9 \times 10^{-3} + 8.1 \times 10^{-4}$.
Give your answer in standard form.

..... [1]

[Total: 1]

- 5 Write 587 000 in standard form.

..... [1]

[Total: 1]

- 6 Change 75 cm^3 into litres.
Give your answer in standard form.

..... litres [2]

[Total: 2]

- 7 Calculate $4.6 \times 10^2 \times 6.7 \times 10^5$.
Give your answer in standard form, correct to 2 significant figures.

..... [2]

[Total: 2]

- 8** Write 0.006 54 in standard form.

..... [1]

[Total: 1]

- 9** Write 0.000 74 in standard form.

..... [1]

[Total: 1]

- 10** Work out the number of seconds in 10 days.
Give your answer in standard form.

..... seconds [2]

[Total: 2]

- 11** Write 567 000 000 in standard form.

..... [1]

[Total: 1]

- 12** 6.5×10^{-2} 6.1×10^{-1} 6.2×10^2 6.79×10^1 6.18×10^2 6.35×10^{-2}

Calculate the product of the largest number and the smallest number from this list.
Give your answer in standard form.

..... [2]

[Total: 2]

- 13** Write the number 0.0605 in standard form.

..... [1]

[Total: 1]

- 14** Calculate $(1.63 \times 10^{12}) \times (2.47 \times 10^{-1})$.
Give your answer in standard form.

..... [1]

[Total: 1]

- 15** Work out $2 \times 10^{100} - 2 \times 10^{98}$, giving your answer in standard form.

..... [2]

[Total: 2]

- 16** Write the following numbers in standard form.

(a) 640 000

..... [1]

(b) 0.0006

..... [1]

[Total: 2]

- 17** Calculate $4.8 \times 10^6 + 3.7 \times 10^7$.
Give your answer in standard form.

..... [1]

[Total: 1]

- 18** Calculate $(3 \times 10^{-3})^3$.
Give your answer in standard form.

..... [1]

[Total: 1]

- 19** Work out $\frac{6.39 \times 10^4}{2.45 \times 10^6}$.

Give your answer in standard form.

..... [2]

[Total: 2]

- 20** Simplify $2.1 \times 10^p + 2.1 \times 10^{p-1}$.
Give your answer in standard form.

..... [2]

[Total: 2]