

Standard Form

Question Paper

Level	GCSE
Subject	Maths
Exam Board	Edexcel GCSE
Topic	Standard Form
Grade Level	Grade 5
Booklet	Question Paper

Time Allowed: 69 minutes

Score: /57

Percentage: /100

Grade Boundaries:

1. (a) Write the number 0.00037 in standard form.

(1)

.....

(b) Write 8.25×10^3 as an ordinary number.

(1)

.....

(c) Work out $(2.1 \times 10^8) \times (6 \times 10^{-5})$.
Write your answer in standard form.

(2)

.....

(4 marks)

2. (a) Write 6.43×10^5 as an ordinary number.

(1)

.....

(b) Work out the value of $2 \times 10^7 \times 8 \times 10^{-12}$
Give your answer in standard form.

(2)

.....

(3 marks)

3. (a) Write down the value of 10^0

.....
(1)

(b) Write 6.7×10^{-5} as an ordinary number.

.....
(1)

(c) Work out the value of $(3 \times 10^7) \times (9 \times 10^6)$
Give your answer in standard form.

.....
(2)

(4 marks)

4. (a) Write 8.2×10^5 as an ordinary number.

.....
(1)

(b) Write 0.000 376 in standard form.

.....
(1)

(c) Work out the value of $(2.3 \times 10^{12}) \div (4.6 \times 10^3)$
Give your answer in standard form.

.....
(2)

(4 marks)

5. A floppy disk can store 1 440 000 bytes of data.

(a) Write the number 1 440 000 in standard form.

.....

(1)

A hard disk can store 2.4×10^9 bytes of data.

(b) Calculate the number of floppy disks needed to store the 2.4×10^9 bytes of data.

.....

(3)

(4 marks)

6. (a) (i) Write 40 000 000 in standard form.

.....

(ii) Write 3×10^{-5} as an ordinary number.

.....

(2)

(b) Work out the value of

$$3 \times 10^{-5} \times 40\,000\,000$$

Give your answer in standard form.

.....

(2)

(4 marks)

7. (a) Write the number 40 000 000 in standard form.

..... (1)

(b) Write 1.4×10^{-5} as an ordinary number.

..... (1)

(c) Work out

$$(5 \times 10^4) \times (6 \times 10^9)$$

Give your answer in standard form.

..... (2)
(4 marks)

8. (a) Write 6.4×10^4 as an ordinary number.

..... (1)

(b) Write 0.0039 in standard form.

..... (1)

(c) Write 0.25×10^7 in standard form.

..... (1)

(d) Work out $(3.2 \times 10^5) \times (4.5 \times 10^4)$ in standard form.

..... (2)

(5 marks)

9. (a) (i) Write 7900 in standard form.

.....

(ii) Write 0.00035 in standard form.

.....

(2)

(b) Work out $\frac{4 \times 10^3}{8 \times 10^{-5}}$

Give your answer in standard form.

.....

(2)

(4 marks)

10. (a) Write 30 000 000 in standard form.

.....

(1)

(b) Write 2×10^{-3} as an ordinary number.

.....

(1)

(2 marks)

11. (a) Write 5.7×10^{-4} as an ordinary number.

.....

(1)

(b) Work out the value of $(7 \times 10^4) \times (3 \times 10^5)$

Give your answer in standard form.

.....

(2)

(3 marks)

12. Write the following numbers in order of size.
Start with the smallest number.

$$0.038 \times 10^2 \quad 3800 \times 10^{-4} \quad 380 \quad 0.38 \times 10^{-1}$$

.....
(2 marks)

-
13. The time taken for light to reach Earth from the edge of the known universe is 14 000 000 000 years.

Light travels at the speed of 9.46×10^{12} km/year.

Work out the distance, in kilometres, from the edge of the known universe to Earth.
Give your answer in standard form.

..... km
(3 marks)

-
14. The surface area of Earth is 510 072 000 km².
The surface area of Jupiter is 6.21795×10^{10} km².

The surface area of Jupiter is greater than the surface area of Earth.
How many times greater?
Give your answer in standard form.

.....
(3 marks)

15.
$$p^2 = \frac{x-y}{xy}$$

$x = 8.5 \times 10^9$
 $y = 4 \times 10^8$

Find the value of p .

Give your answer in standard form correct to 2 significant figures.

.....
(4 marks)

16.

$$y^2 = \frac{ab}{a+b}$$

$a = 3 \times 10^8$
 $b = 2 \times 10^7$

Find y .

Give your answer in standard form correct to 2 significant figures.

$y = \dots\dots\dots$
(4 marks)
