

Name: _____

Exam Style Questions

Standard Form



Corbettmαths

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser

You may use tracing paper if needed

Guidance

1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Revision for this topic

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[Video 300](#)

[Video 301](#)

[Video 302](#)

[Video 303](#)



1. Write the following numbers in standard form.



(a) 40000

.....
(1)

(b) 5600

.....
(1)

(c) 41200000

.....
(1)

(d) 0.00000008

.....
(1)

(e) 0.000345

.....
(1)

2. Write 3734100000 in standard form.



.....
(1)

3. Write 0.000000000000412 in standard form.



.....
(1)

4. Calculate, writing your answer in standard form



$$(2.05 \times 10^5) \times (8.17 \times 10^3)$$

.....
(2)

5. Work out, giving each answer in standard form.



(a)

$$(4 \times 10^5) \times (2 \times 10^4)$$

.....
(2)

(b)

$$(5 \times 10^6) \times (7 \times 10^8)$$

.....
(2)

6. Work out, giving each answer in standard form.



(a)

$$(3 \times 10^4) \div (6 \times 10^{-3})$$

.....
(2)

(b)

$$(2.1 \times 10^{-5}) \div (7 \times 10^{-4})$$

.....
(2)

(c)

$$(5 \times 10^4)^2$$

.....
(2)

7. Mr Holland has 2500kg of rice.



- (a) Write 2500 kg in grams.
Give your answer in standard form.

.....g
(2)

- (b) One grain of rice weighs 0.03g
Write the weight of one grain of rice in standard form.

.....g
(1)

- (c) How many grains of rice are there in 2500kg of rice?
Give your answer in standard form.

.....
(2)

8. (a) Write five million in standard form.



.....
(1)

(b) Write three hundred thousand in standard form.

.....
(1)

(c) Work out five million multiplied by three hundred thousand.
Give your answer in standard form.

.....
(2)

9. A calculator displays a number in standard form.



Write the number as an ordinary number.

.....
(1)

10. The table gives the circumference, in metres, of planets in the solar system. The circumferences are given to an accuracy of 3 significant figures.



Planet	Circumference (metres)
Mercury	1.54×10^7
Venus	3.81×10^7
Earth	4.01×10^7
Mars	2.13×10^7
Jupiter	4.39×10^8
Saturn	3.66×10^8
Uranus	1.59×10^8
Neptune	1.55×10^8

- (a) Which planet has the largest circumference?

.....
(1)

- (b) Which planet has the smallest circumference?

.....
(1)

- (c) Write 1.54×10^7 as an ordinary number.

.....
(1)

- (d) Work out the diameter of Neptune.
Give your answer in standard form.

.....
(2)

11. The number of visitors to some tourist attractions is shown in the table below.



The King's Palace	5.4 million
Castle	923,840
Theme Park	1.43×10^7
Science Museum	4,192,900

(a) Write the number of visitors to the Theme Park as an ordinary number.

.....
(1)

(b) Write the number of visitors to the Castle in standard form.

.....
(1)

(c) How many more people visited the Theme Park than the Science.

.....
(2)

12. The distance of the moon to the Earth is 384,400 km.
The speed of light is 2.998×10^8 m/s.



Work out how long it will take light to travel from the moon to the Earth.
Include suitable units.

.....
(3)

13. a, b and c are standard form numbers.



$$a = 5.4 \times 10^4$$

$$b = 4.9 \times 10^5$$

$$c = 4 \times 10^6$$

- (a) Calculate $b - a$

.....
(2)

- (b) Calculate c^2

.....
(2)

- (c) Calculate ac

.....
(2)

14. The population of England is 5.301×10^7
The number of people who live in London is 8.308×10^6



What percentage of the population of England live in London?

.....
(2)

15. Find the value of $(2.19 \times 10^8) \times (3.52 \times 10^3)$.
Give your answer in standard form.



.....
(2)

16. Work out $(4.5 \times 10^7) \div (5 \times 10^{-2})$
Give your answer in standard form.



.....
(2)

17. (a) Write 5930000000 in standard form.



.....
(1)

(b) Write 8.024×10^{-4} as an ordinary number.

.....
(1)

(c) $c = 2 \times 10^6$ and $y = 6 \times 10^5$

$$w^2 = \frac{cy}{c - y}$$

Work out the value of w .

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

.....
(3)

18. Work out $(1.52 \times 10^5) + (5.4 \times 10^4)$



Give your answer in standard form.

.....
(3)

19. The Earth is approximately a sphere of diameter 12742 km.
The surface area of a sphere is given by the formula $A = 4\pi r^2$



Calculate the surface area of the Earth.
Give your answer in metres squared and in standard form.

.....m²
(3)