

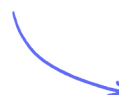
Exam Questions

Powers, Roots & Standard Form

Powers & Roots / Laws of Indices / Converting to & from Standard Form /
Operations with Standard Form

Easy (12 questions)	/15
Medium (10 questions)	/30
Hard (5 questions)	/11
Total Marks	/56

Scan here to return to the course
or visit [savemyexams.com](https://www.savemyexams.com)



Easy Questions

1 Write down the value of 19^0 .

(1 mark)

2 The cost of building a ship was \$153000000.

Write 153000000 in standard form.

(1 mark)

3 Write the number 40 in standard form.

(1 mark)

4 Write 2020 in standard form.

(1 mark)

5 Write 15060 in standard form.

(1 mark)

6 (a) Write 72000 in standard form.

(1 mark)

(b) Write 0.0018 in standard form.

(1 mark)

7 Write down the value of 25^0 .

(1 mark)

8 (a) Write 640000 in standard form.

(1 mark)

(b) Write 0.0006 in standard form.

(1 mark)

9 Write 0.00527 in standard form.

(1 mark)

10 Write 2760000 in standard form.

(1 mark)

11 Write 0.0000523 in standard form.

(1 mark)

12 (a) Write 0.000347 in standard form.

(1 mark)

(b) Write 6.7201×10^3 as an ordinary number.

(1 mark)

Medium Questions

- 1 i) Write 9.314×10^5 as an ordinary number.

[1]

- ii) Calculate $(4.1 \times 10^{-3}) \times (8.9 \times 10^7)$
Give your answer in standard form.

[2]

(3 marks)

- 2 Find the value of

- i) 3^0 ,

[1]

- ii) 5^{-2} .

[1]

(3 marks)

- 3 (a) Write the number 0.0605 in standard form.

(2 marks)

(b) Calculate $(1.63 \times 10^{12}) \times (2.47 \times 10^{-1})$

Give your answer in standard form.

(1 mark)

4 (a) Write 45000 in standard form.

(1 mark)

(b) Write 2.06×10^{-2} as an ordinary number.

[1]

(1 mark)

5 i) Write down the reciprocal of 15.

[1]

ii) Write down the value of 15^0 .

[1]

iii) Write 0.015 in standard form.

[1]

(3 marks)

6 (a) Find the value of $6^0 + 6^2$

(2 marks)

(b) Find the value of 5^{-3}

(2 marks)

7 i) Write 4.2×10^{-3} as an ordinary number.

[1]

ii) Calculate $(8.1 \times 10^3) + (7.9 \times 10^4)$ Give your answer in standard form.

[2]

(3 marks)

8 Find the value of

i) $\sqrt[3]{512}$

[1]

ii) $\frac{6^8}{2^6}$

[1]

iii) 7^0

[1]

(3 marks)

9 Find the value of $(\sqrt{25})^2$.

(1 mark)

10 (a) (i) Write $3^4 \times 3^3$ in the form 3^n

(ii) Write down the value of 3^{-1}

(2 marks)

(b) Write $\frac{7^8 \times 7^4}{7^3}$ in the form 7^n where n is an integer

(3 marks)

Hard Questions

- 1 i) Write 4.81×10^{-3} as an ordinary number.

[1]

- ii) Write 75000 in standard form.

[1]

- iii) Calculate $\frac{6.3 \times 10^2}{7 \times 10^{-3}}$

Write your answer in standard form.

[2]

(4 marks)

- 2 Find the value of x when $5^x \times 5^3 = 5^{12}$

$x = \dots\dots\dots$

(1 mark)

- 3 The average distance from Earth to Mars is 2.25×10^8 km. A space ship travels from Earth to Mars at an average speed of 5.8×10^4 km/h.

Find how long, in hours, the journey takes.

$\dots\dots\dots$ hours

(2 marks)

4 Find the value of p when $5^p \div 5^8 = 5^{13}$.

$p = \dots\dots\dots$

(1 mark)

5 Mercury is 58 000 000 km from the sun.

Jupiter is 7.22×10^8 km further from the sun than Mercury.

Earth is 1.5×10^8 km from the sun.

Find how many times further from the sun Jupiter is, than Earth.

(3 marks)