

GCSE Mathematics

F

Indices & Roots Practice

Foundation, Grade 4-6

Total Marks	Time	Questions
22	22 min	20

Instructions:

- Do not use a calculator when you see: 
- Answer all questions in the spaces provided.
- Show all your working - marks are awarded for method as well as final answers.
- Cross through any work you do not want to be marked.
- Check your answers if you have time at the end.

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Edexcel-style questions**Q1** 

Grade 4

Edexcel style

Simplify $3^4 \times 3^2$. Give your answer as a single power of 3.

Answer

teachably

[1 mark]**Q2** 

Grade 4

Edexcel style

Simplify $(2^3)^4$. Give your answer as a single power of 2.

Answer

teachably

[1 mark]**Q3** 

Grade 5

Edexcel style

Work out 7^0 .

Answer

teachably

[1 mark]

Q4 

Grade 4

Edexcel style

Work out $\sqrt{144}$.

Answer

teachably

[1 mark]**Q5** 

Grade 6

Edexcel style

Work out $25^{\frac{1}{2}}$.

Answer

teachably

[1 mark]

AQA-style questions**Q6** 

Grade 4

AQA style

Simplify $a^5 \div a^2$.

Answer

teachably

[1 mark]**Q7** 

Grade 4

AQA style

Simplify $(x^2)^5$.

Answer

teachably

[1 mark]**Q8** 

Grade 5

AQA style

Work out 2^{-3} . Give your answer as a fraction.

Answer

teachably

[1 mark]

Q9 

Grade 4

AQA style

Work out $\sqrt[3]{64}$.

Answer

teachably

[1 mark]**Q10** 

Grade 6

AQA style

Work out $8^{\frac{1}{3}}$.

Answer

teachably

[1 mark]

OCR-style questions**Q11** 

Grade 4

OCR style

Simplify $5^7 \div 5^3$. Give your answer as a single power of 5.

Answer

teachably

[1 mark]**Q12** 

Grade 4

OCR style

Simplify $(3^2)^3$. Give your answer as a single power of 3.

Answer

teachably

[1 mark]**Q13** 

Grade 5

OCR style

Work out 5^{-2} . Give your answer as a fraction.

Answer

teachably

[1 mark]

Q14 

Grade 4

OCR style

Work out $\sqrt{225}$.

Answer

teachably

[1 mark]**Q15** 

Grade 6

OCR style

Work out $27^{\frac{2}{3}}$.

Answer

teachably

[2 marks]

Teachably-style questions**Q16** 

Grade 4

Teachably style

Simplify $b^3 \times b^4$.

Answer

teachably

[1 mark]**Q17** 

Grade 4

Teachably style

Simplify $(y^4)^3$.

Answer

teachably

[1 mark]**Q18** 

Grade 5

Teachably style

Work out $4^0 \times 3^2$.

Answer

teachably

[1 mark]

Q19 

Grade 4

Teachably style

Work out $\sqrt[3]{-27}$.

Answer

teachably

[1 mark]**Q20** 

Grade 6

Teachably style

Work out $16^{\frac{3}{4}}$.

Answer

teachably

[2 marks]**END OF PAPER****Want help from an expert maths tutor?**

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