

GCSE Mathematics

H

Surds Practice

Higher, Grade 6-8

Total Marks	Time	Questions
40	40 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 6

Edexcel style

Simplify $\sqrt{50}$.

Answer

teachably

[2 marks]**Q2** 

Grade 6

Edexcel style

Simplify $\sqrt{8} + 3\sqrt{2}$.

Answer

teachably

[2 marks]**Q3** 

Grade 7

Edexcel style

Simplify $\sqrt{3} \times \sqrt{12}$.

Answer

teachably

[2 marks]

Q4

Grade 7

Edexcel style

Rationalise the denominator of $\frac{5}{\sqrt{5}}$. Give your answer in its simplest form.

Answer

teachably

[2 marks]**Q5**

Grade 8

Edexcel style

Rationalise the denominator of $\frac{1}{2 + \sqrt{3}}$.

Answer

teachably

[2 marks]

AQA-style questions**Q6** 

Grade 6

AQA style

Simplify $\sqrt{72}$.

Answer

teachably

[2 marks]**Q7** 

Grade 6

AQA style

Simplify $\sqrt{27} + 2\sqrt{3}$.

Answer

teachably

[2 marks]**Q8** 

Grade 7

AQA style

Simplify $\sqrt{6} \times \sqrt{8}$.

Answer

teachably

[2 marks]

Q9

Grade 7

AQA style

Rationalise the denominator of $\frac{6}{\sqrt{3}}$. Give your answer in its simplest form.

Answer

teachably

[2 marks]**Q10**

Grade 8

AQA style

Rationalise the denominator of $\frac{1}{3 - \sqrt{2}}$.

Answer

teachably

[2 marks]

OCR-style questions**Q11** 

Grade 6

OCR style

Simplify $\sqrt{45}$.

Answer

teachably

[2 marks]**Q12** 

Grade 6

OCR style

Simplify $4\sqrt{5} - \sqrt{20}$.

Answer

teachably

[2 marks]**Q13** 

Grade 7

OCR style

Expand and simplify $\sqrt{2}(3 + \sqrt{2})$.

Answer

teachably

[2 marks]

Q14

Grade 7

OCR style

Rationalise the denominator of $\frac{4}{\sqrt{2}}$. Give your answer in its simplest form.

Answer

teachably

[2 marks]**Q15**

Grade 8

OCR style

Rationalise the denominator of $\frac{4}{1 + \sqrt{5}}$.

Answer

teachably

[2 marks]

Teachably-style questions**Q16** 

Grade 6

Teachably style

Simplify $\sqrt{98}$.

Answer

teachably

[2 marks]**Q17** 

Grade 6

Teachably style

Simplify $\sqrt{32} - \sqrt{8}$.

Answer

teachably

[2 marks]**Q18** 

Grade 7

Teachably style

Expand and simplify $\sqrt{5}(\sqrt{5} - 2)$.

Answer

teachably

[2 marks]

Q19

Grade 7

Teachably style

Rationalise the denominator of $\frac{10}{\sqrt{5}}$. Give your answer in its simplest form.

Answer

teachably

[2 marks]**Q20**

Grade 8

Teachably style

Rationalise the denominator of $\frac{2}{\sqrt{7}-2}$.

Answer

teachably

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

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