

Name: \_\_\_\_\_

## GCSE (1 – 9)

# Powers and Roots

### Instructions

- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

### Information

- The marks for each question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*

### Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end

1 Work out  $2^3$

.....  
**(Total for Question 1 is 1 mark)**

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2 Work out the cube root of 64

.....  
**(Total for Question 2 is 1 mark)**

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3 Write down the value of  $\sqrt{49}$

.....  
**(Total for Question 3 is 1 mark)**

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4 Write down the value of  $3^2$

.....  
**(Total for Question 4 is 1 mark)**

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5 Write down a square number that is also an even number.

.....  
**(Total for Question 5 is 1 mark)**

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6 Write down the value of  $5^2$

.....  
**(Total for Question 6 is 1 mark)**

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7 Work out  $10^4$

.....  
**(Total for Question 7 is 1 mark)**

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8 Write down the value of  $\sqrt{36}$

.....  
**(Total for Question 8 is 1 mark)**

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9 Work out  $2^4$

.....  
**(Total for Question 9 is 1 mark)**

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10 Work out the cube root of 27

.....  
**(Total for Question 10 is 1 mark)**

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11 Write down the value of  $\sqrt{81}$

.....  
**(Total for Question 11 is 1 mark)**

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12 Write down the value of  $4^2$

.....  
**(Total for Question 12 is 1 mark)**

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13 Write down a square number that is also an odd number.

.....  
**(Total for Question 13 is 1 mark)**

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14 Work out  $5^3$

.....  
**(Total for Question 14 is 1 mark)**

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15 Write down the value of  $8^2$

.....  
**(Total for Question 15 is 1 mark)**

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16 Work out the value of  $5 \times 10^3$

.....  
**(Total for Question 16 is 1 mark)**

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**17** Here is a list of numbers

4    6    8    11    12    15    16    25

From the list, write down all the numbers that are powers of 2.

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(Total for Question 17 is 1 mark)

**18** Write  $5 \times 5 \times 5 \times 5$  as a power of 5

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(Total for Question 18 is 1 mark)

**19** Here is a list of numbers

5    9    11    16    20    25    32    38

From the list, write down all the square numbers.

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(Total for Question 19 is 1 mark)

**20** Here is a list of numbers

6    12    15    21    27    36    64    80

From the list, write down all the cube numbers.

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(Total for Question 20 is 1 mark)