JP Maths Revision

Attempt the paper before watching the solutions https://www.youtube.com/@JPMathsRevision

Foundation Tier

Powers and Roots

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You must **show all your working.**
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

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:

(a) 5^2

25

.....

(1)

(b) 4^3

64

.....

(1)

(c) 10^2

100

.....

(1)

(d) 3^3

27

.....

(1)

(e) 2^4

16

.....

(1)

(Total for Question 1 is 5 marks)

2. Work out:

(a) $\sqrt{25}$

5

.....

(1)

(b) $\sqrt{100}$

10

.....

(1)

(c) $\sqrt{16}$

4

.....

(1)

(d) $\sqrt{1}$

1

.....

(1)

(e) $\sqrt[3]{8}$

2

.....

(1)

(f) $\sqrt[4]{16}$

2

.....

(1)

(g) $\sqrt[3]{125}$

5

.....

(1)

(h) $\sqrt[3]{1000}$

10

.....

(1)

(Total for Question 2 is 8 marks)

3. Which of the following are square numbers?

12, 16, 18, 25, 30, 36

16, 25, 36

(Total for Question 3 is 1 mark)

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4. Which of the following are cube numbers?

8, 9, 16, 27, 32, 64

8, 27, 64

(Total for Question 4 is 1 mark)

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5. Write down all the square numbers less than 50

1, 4, 9, 16, 25, 36, 49

(Total for Question 5 is 2 marks)

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6. Write down all the cube numbers less than 100

1, 8, 27, 64

(Total for Question 6 is 2 marks)