ENGLAND GCSE MATHS EDEXCEL HIGHER · UNIT 8 · 25 QUESTIONS

Proportion, Rates of Change, Growth and Decay — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button so it can be fixed.

1 **A passenger aeroplane travels 1600 km in 2 hours. Its average speed is**

- A 800
- B 900
- C 1600
- D 700

Understand It with Pulse | Flag a mistake

2 **Water flows into a swimming pool at 25 litres per minute. How long does it take to fill 750 litres?**

- A 40
- B 30
- C 60
- D 20

Understand It with Pulse | Flag a mistake

3 **A bicycle travels 75 km in 5 hours. Its average speed is**

- A 20
- B 10
- C 30
- D 15

Understand It with Pulse | Flag a mistake

4 **A passenger train travels 150 km in 3 hours. Its average speed, in km/h, is**

- A 60
- B 25
- C 450
- D 50

Understand It with Pulse | Flag a mistake

5 **A rocket travels 4800 km in 4 hours. Its average speed is**

- A 1100
- B 1300
- C 1200
- D 2400

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6 **A red race car worth £20000 loses 15% of its value each year. How much is it worth after one year?**

- A £18000
- B £19700
- C £17000
- D £3000

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7 **y is inversely proportional to x and y = 30 when x = 2. Find y when x = 3.**

- A 180
- B 50
- C 20
- D 45

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8 **Convert 72 km/h into $\frac{m}{s}$**

A 20

B 25

C 259.2

D 40

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9 **A block has mass 360 g and volume 40 cm³. Its density, in g/cm³, is**

A 14400

B 180

C 11

D 9

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10 **On a distance-time graph, a car travels 60 km in 2 hours at a steady speed. The speed of the car, in km/h, is**

- A 120
- B 58
- C 30
- D 60

Understand It with Pulse | Flag a mistake

11 **y is directly proportional to x and y = 12 when x = 2. Find y when x = 9.**

- A 15
- B 54
- C 108
- D 60

Understand It with Pulse | Flag a mistake

12 **y is inversely proportional to x^2 and $y = 18$ when $x = 1$. Find y when $x = 4$.**

- A 1
- B 19
- C 72
- D 4

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13 **A population of 100 grows by 5% each year. After 3 years the population is about**

- A 116
- B 126
- C 200
- D 115

Understand It with Pulse | Flag a mistake

14 **Money of £5000 is invested at 5% compound interest per year. How much is it worth after 2 years?**

- **A** £5500
- **B** £5512.50
- **C** £5250
- **D** £5562.50

Understand It with Pulse | Flag a mistake

15 **A force of 480 N acts on an area of 6 m². The pressure, in $\frac{\text{N}}{\text{m}^2}$, is**

- **A** 240
- **B** 85
- **C** 80
- **D** 2880

Understand It with Pulse | Flag a mistake

16 **y is inversely proportional to x and y = 9 when x = 4. Find y when x = 12.**

A 3

B 27

C 432

D 12

Understand It with Pulse | Flag a mistake

17 **Convert 36 km/h into $\frac{m}{s}$**

A 129.6

B 10

C 20

D 15

Understand It with Pulse | Flag a mistake

18 **A block has mass 240 g and volume 120 cm³. Its density, in g/cm³, is**

A 4

B 120

C 28800

D 2

Understand It with Pulse | Flag a mistake

19 **On a distance-time graph, a car travels 90 km in 3 hours at a steady speed. The speed of the car, in km/h, is**

A 30

B 270

C 87

D 60

Understand It with Pulse | Flag a mistake

20 **y is directly proportional to x and y = 16 when x = 2. Find y when x = 3.**

- A 32
- B 11
- C 48
- D 24

Understand It with Pulse | Flag a mistake

21 **y is inversely proportional to x^2 and y = 12 when x = 1. Find y when x = 6.**

- A 72
- B 12
- C 0
- D 2

Understand It with Pulse | Flag a mistake

22 **Money of £5000 is invested at 2% compound interest per year. How much is it worth after 2 years?**

- A £5202
- B £5100
- C £5252
- D £5200

Understand It with Pulse | Flag a mistake

23 **A force of 120 N acts on an area of 6 m². The pressure, in $\frac{\text{N}}{\text{m}^2}$, is**

- A 25
- B 60
- C 720
- D 20

Understand It with Pulse | Flag a mistake

24 **A yellow school bus travels 210 km in 2.5 hours. Its average speed, in km/h, is**

- A 94
- B 84
- C 525
- D 42

Understand It with Pulse | Flag a mistake

25 **y is inversely proportional to x and y = 24 when x = 2. Find y when x = 4.**

- A 192
- B 12
- C 36
- D 48

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. A
2. B
3. D
4. D
5. C
6. C
7. C
8. A
9. D
10. C
11. B
12. A
13. A
14. B
15. C
16. A
17. B
18. D
19. A
20. D
21. C
22. A
23. D
24. B
25. B

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