ENGLAND GCSE MATHS OCR HIGHER · FINAL EXAM · 50 QUESTIONS

Final Exam — 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 to let Brett know so he can fix it.

1 **Each box holds 5 lemons. How many lemons are in 3 boxes?**

- A 10
- B 8
- C 20
- D 15

Understand It with Pulse | Flag a mistake

2 **A box contains 18 eggs. $\frac{1}{4}$ of the eggs are cracked. How many eggs are not cracked?**

- A 4
- B 14
- C 12
- D 16

Understand It with Pulse | Flag a mistake

3 **Give your answer in its simplest form 2a + 3b + 4a - b, where a is the number of red apples and b is the number of lemons.**

- A 6a + 2b
- B 6a
- C 6a + 4b
- D 2b

Understand It with Pulse | Flag a mistake

4 **A passenger aeroplane climbs 600 m for every 5000 m it travels forwards. The gradient of its flight path is**

- A $\frac{1}{10}$
- B $\frac{3}{25}$
- C $\frac{25}{3}$
- D $\frac{7}{50}$

Understand It with Pulse | Flag a mistake

5 **A cup of coffee costs x pounds. 3 cups of coffee cost £15. The value of x is**

- A £5
- B £4
- C £15
- D £6

Understand It with Pulse | Flag a mistake

6 **A sunflower is 15 cm tall. It grows 6 cm each week. Its height after 8 weeks is**

- A 51
- B 69
- C 57
- D 63

Understand It with Pulse | Flag a mistake

7 **The ratio of burgers to chicken nuggets on a school lunch tray is 3 : 5. There are 6 burgers. How many chicken nuggets are there?**

- A 6
- B 11
- C 16
- D 10

Understand It with Pulse | Flag a mistake

8 **A yellow school bus travels 150 km in 3 hours. Its average speed, in km/h, is**

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

Understand It with Pulse | Flag a mistake

9 **A Ferris wheel has 8 equally spaced gondolas. The angle between neighbouring gondolas is**

- A 8
- B 45
- C 40
- D 50

Understand It with Pulse | Flag a mistake

10 **A cup of coffee fills a cylindrical cup with radius 4 cm and height 10 cm. The volume of the coffee is, to one decimal place, about**

- A 502.7 cm^3
- B 50.3 cm^3
- C 125.7 cm^3
- D 1005.3 cm^3

Understand It with Pulse | Flag a mistake

11 **A passenger aeroplane takes off at an angle of 30° and flies 300 m. Its height is**

- A 150
- B 160
- C 300
- D 140

Understand It with Pulse | Flag a mistake

12 **A fair coin is tossed. The probability of a head is**

- A $\frac{1}{2}$
- B $\frac{1}{4}$
- C $\frac{1}{3}$
- D $\frac{2}{3}$

Understand It with Pulse | Flag a mistake

13 **Two data sets have the same median but different ranges. The one with the larger range is**

A more spread out

B the one with the larger median

C less spread out

D exactly the same

Understand It with Pulse | Flag a mistake

14 **The value of 10^4 is**

A 10010

B 40

C 10000

D 5000

Understand It with Pulse | Flag a mistake

15 **In a sale a jacket is reduced by 20% to £80. What was the price before the sale?**

- A £96
- B £100
- C £90
- D £110

Understand It with Pulse | Flag a mistake

16 **Give your answer in its simplest form 4a + 6b - 4a + b**

- A 7b
- B 8a + 7b
- C 5b
- D 7a

Understand It with Pulse | Flag a mistake

17 **A line is perpendicular to y = 1/4x + 0. The gradient of the perpendicular line is**

- A -1/4
- B -4
- C $\frac{1}{4}$
- D 4

Understand It with Pulse | Flag a mistake

18 **A number multiplied by 3, plus 5, is 26. What is the number?**

- A 8
- B 6
- C 9
- D 7

Understand It with Pulse | Flag a mistake

19 The next two terms of the sequence 7, 10, 13, 16 are

- A 19, 22
- B 16, 19
- C 22, 28
- D 22, 25

Understand It with Pulse | Flag a mistake

20 Write the ratio 18 : 6 in its simplest form

- A 1 : 3
- B 18 : 6
- C 3 : 1
- D 6 : 2

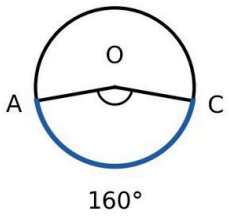
Understand It with Pulse | Flag a mistake

21 On a distance-time graph, a car travels 120 km in 2 hours at a steady speed. The speed of the car, in km/h, is

- A 240
- B 118
- C 120
- D 60

Understand It with Pulse | Flag a mistake

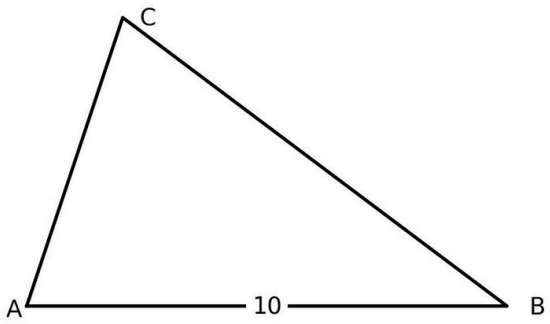
22 An angle at the centre of a circle stands on an arc of 160°. The angle at the circumference standing on the same arc is



- A 320°
- B 160°
- C 90°
- D 80°

Understand It with Pulse | Flag a mistake

23 **A triangle has base 10 cm and height 6 cm. Its area is**



- **A** 60 cm²
- **B** 16 cm²
- **C** 30 cm²
- **D** 40 cm²

Understand It with Pulse | Flag a mistake

24 **The vector a = (4, 3) and the vector b = (2, 2). The vector a + b is**

- A (2, 1)
- B (6, 5)
- C (7, 5)
- D (6, 1)

Understand It with Pulse | Flag a mistake

25 **A coin is tossed 100 times. It lands on heads 37 times. The relative frequency of heads is**

- A 0.32
- B 0.42
- C 0.37
- D 0.63

Understand It with Pulse | Flag a mistake

26 A class interval 10-20 has frequency 12. Its frequency density is

- A 1.2
- B 12
- C 120
- D 0.8

Understand It with Pulse | Flag a mistake

27 Each bag holds 11 red apples. How many red apples are in 5 bags?

- A 16
- B 44
- C 55
- D 66

Understand It with Pulse | Flag a mistake

28 **An ice cream cone costs £3.20. The price increases by 10%. What is the new price?**

A £3.70

B £4.02

C £3.52

D £2.88

Understand It with Pulse | Flag a mistake

29 **The height of a rocket, in metres, after t seconds is $h = 20t - 5t^2$. When t = 2, the height is**

A 15

B 20

C 40

D 25

Understand It with Pulse | Flag a mistake

30 **A passenger aeroplane climbs 900 m for every 3000 m it travels forwards. The gradient of its flight path is**

- **A** $\frac{3}{10}$
- **B** $\frac{9}{40}$
- **C** $\frac{10}{3}$
- **D** $\frac{1}{3}$

Understand It with Pulse | Flag a mistake

31 **A sandwich costs x pounds. 4 sandwiches cost £16. The value of x is**

- **A** £5
- **B** £4
- **C** £16
- **D** £3

Understand It with Pulse | Flag a mistake

32 **A honeybee visits flowers: 4, 8, 12, 16. The next number is**

- A 24
- B 16
- C 20
- D 28

Understand It with Pulse | Flag a mistake

33 **There are 200 silver coins. 35% of them are old. How many old silver coins are there?**

- A 80
- B 35
- C 135
- D 70

Understand It with Pulse | Flag a mistake

34 **A red race car worth £12000 loses 15% of its value each year. How much is it worth after one year?**

- A £11200
- B £10200
- C £1800
- D £11820

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35 **A castle is 25 m tall. Its model is 50 cm tall. The scale factor from the model to the real castle is**

- A 40
- B 100
- C 50
- D 60

Understand It with Pulse | Flag a mistake

36 **A swimming pool is 30 m long, 12 m wide and 2 m deep. Its volume is**

- A 744 m^3
- B 720 m^3
- C 820 m^3
- D 360 m^3

Understand It with Pulse | Flag a mistake

37 **A brown dog walks 6 m east and then 8 m north. How far is it from its starting point?**

- A 9
- B 14
- C 10
- D 11

Understand It with Pulse | Flag a mistake

38 **The probability of rain is 0.6. The probability of no rain is**

- A 0.6
- B 0.5
- C 0.3
- D 0.4

Understand It with Pulse | Flag a mistake

39 **The heights of 6 horses, in hands, are 18, 17, 18, 18, 15, 16. The mode is**

- A 18
- B 17
- C 16
- D 15

Understand It with Pulse | Flag a mistake

40 **Write <svg viewBox="0 0 101 100" preserveAspectRatio="none" aria-hidden="true" style="position:absolute;left:0;top:-.14em;width:100%;height:calc(100% + 0.14em);overflow:visible"><path d="M3 52 L21 97 L40 6 L101 6" fill="none" stroke="currentColor" stroke-width="2.6" stroke-linejoin="round" stroke-linecap="round" vector-effect="non-scaling-stroke"/></svg>8square root of 8 + <svg viewBox="0 0 101 100" preserveAspectRatio="none" aria-hidden="true" style="position:absolute;left:0;top:-.14em;width:100%;height:calc(100% + 0.14em);overflow:visible"><path d="M3 52 L21 97 L40 6 L101 6" fill="none" stroke="currentColor" stroke-width="2.6" stroke-linejoin="round" stroke-linecap="round" vector-effect="non-scaling-stroke"/></svg>2square root of 2 in the form a<svg viewBox="0 0 101 100" preserveAspectRatio="none" aria-hidden="true" style="position:absolute;left:0;top:-.14em;width:100%;height:calc(100% + 0.14em);overflow:visible"><path d="M3 52 L21 97 L40 6 L101 6" fill="none" stroke="currentColor" stroke-width="2.6" stroke-linejoin="round" stroke-linecap="round" vector-effect="non-scaling-stroke"/></svg>2square root of 2**

2<svg viewBox="0 0 101 100" preserveAspectRatio="none" aria-hidden="true"

A style="position:absolute;left:0;top:-.14em;width:100%;height:calc(100% + 0.14em);overflow:visible"><path d="M3 52 L21 97 L40 6 L101 6" fill="none" stroke="currentColor" stroke-width="2.6" stroke-linejoin="round" stroke-linecap="round" vector-effect="non-scaling-stroke"/></svg>2square root of 2

B 4<svg viewBox="0 0 101 100" preserveAspectRatio="none" aria-hidden="true" style="position:absolute;left:0;top:-.14em;width:100%;height:calc(100% + 0.14em);overflow:visible"><path d="M3 52 L21 97 L40 6 L101 6" fill="none" stroke="currentColor" stroke-width="2.6" stroke-linejoin="round" stroke-linecap="round" vector-effect="non-scaling-stroke"/></svg>2square root of 2

C <svg viewBox="0 0 150 100" preserveAspectRatio="none" aria-hidden="true" style="position:absolute;left:0;top:-.14em;width:100%;height:calc(100% + 0.14em);overflow:visible"><path d="M3 52 L21 97 L40 6 L150 6" fill="none" stroke="currentColor" stroke-width="2.6" stroke-linejoin="round" stroke-linecap="round" vector-effect="non-scaling-stroke"/></svg>10square root of 10

D 3<svg viewBox="0 0 101 100" preserveAspectRatio="none" aria-hidden="true" style="position:absolute;left:0;top:-.14em;width:100%;height:calc(100% + 0.14em);overflow:visible"><path d="M3 52 L21 97 L40 6 L101 6" fill="none" stroke="currentColor" stroke-width="2.6" stroke-linejoin="round" stroke-linecap="round" vector-effect="non-scaling-stroke"/></svg><span

style="position:relative">2square root of 2

Understand It with Pulse | Flag a mistake

41 **There are 200 silver coins. 5% of them are old. How many old silver coins are there?**

A 10

B 5

C 195

D 30

Understand It with Pulse | Flag a mistake

42 **Give your answer in its simplest form 3a + 3b - a + 5b**

A 4a + 8b

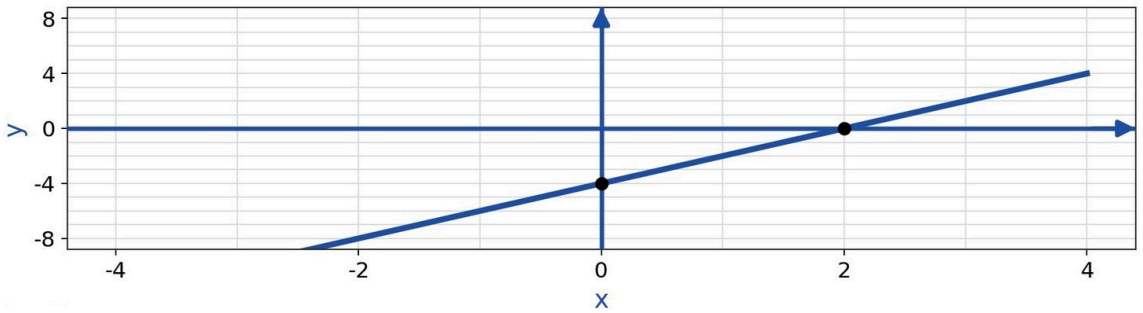
B 2b + 8a

C 2a - 2b

D 2a + 8b

Understand It with Pulse | Flag a mistake

43 **The graph shows a straight line through (0, -4). The gradient of the line is**



A 3

B -2

C 2

D -4

Understand It with Pulse | Flag a mistake

44 **A cup of coffee costs x pounds. 3 cups of coffee cost £6. The value of x is**

- A £2
- B £3
- C £6
- D £1

Understand It with Pulse | Flag a mistake

45 **A thermometer records the temperature falling by 2 degrees each hour: 26, 24, 22, 20. The next temperature is**

- A 16
- B 22
- C 20
- D 18

Understand It with Pulse | Flag a mistake

46 **Find 65% of 200**

- A 130
- B 70
- C 65
- D 140

Understand It with Pulse | Flag a mistake

47 **On a distance-time graph, a car travels 120 km in 4 hours at a steady speed. The speed of the car, in km/h, is**

- A 60
- B 30
- C 480
- D 116

Understand It with Pulse | Flag a mistake

48 **A shape with area 5 cm² is enlarged by scale factor 4. The area of the enlarged shape is**

- A 9 cm²
- B 320 cm²
- C 20 cm²
- D 80 cm²

Understand It with Pulse | Flag a mistake

49 **A rectangle is 12 cm long and 9 cm wide. Its perimeter is**

- A 44 cm
- B 42 cm
- C 21 cm
- D 108 cm

Understand It with Pulse | Flag a mistake

50 **A kite string is 14 m long and makes an angle of 30° with the ground. The height of the kite is**

A 14

B 6

C 7

D 8

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	D	**18.**	D	**35.**	C
2.	B	**19.**	A	**36.**	B
3.	A	**20.**	C	**37.**	C
4.	B	**21.**	D	**38.**	D
5.	A	**22.**	D	**39.**	A
6.	D	**23.**	C	**40.**	D
7.	D	**24.**	B	**41.**	A
8.	C	**25.**	C	**42.**	D
9.	B	**26.**	A	**43.**	C
10.	A	**27.**	C	**44.**	A
11.	A	**28.**	C	**45.**	D
12.	A	**29.**	B	**46.**	A
13.	A	**30.**	A	**47.**	B
14.	C	**31.**	B	**48.**	D
15.	B	**32.**	C	**49.**	B
16.	A	**33.**	D	**50.**	C
17.	B	**34.**	B		

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