Maths Mock Test Paper 27

Name: _____ Date: _____

Time allowed: **50 minutes** **50 questions**, 1 mark each

Answer **every** question. Each question has five options, **A** to **E**, and exactly one is correct. Work out the answer and mark the letter you have chosen. Marks are not taken away for a wrong answer, so it is worth having a go at every question. **Calculators and rulers are not allowed.**

Q1. A ribbon is 1 metre long. 3/10 of it is red, 45 cm of it is blue and the rest is white. How long is the white part?

A. 22 cm *B.* 25 cm *C.* 42 cm *D.* 52 cm *E.* 55 cm

Q2. What number is missing from this sequence? 3, 5, 9, 17, ?, 65

A. 25 *B.* 31 *C.* 34 *D.* 41 *E.* 33

Q3. Kai says that a 2.46 kg bag of rice weighs 2 kg to the nearest kilogram, and 2.5 kg to one decimal place. Which of these is true?

A. Both are right

B. Only the nearest kilogram is right

C. Only the one decimal place is right

D. Neither is right

E. It is 3 kg to the nearest kilogram

Q4. Which of these capital letters has a horizontal line of symmetry?

A. A *B.* B *C.* M *D.* T *E.* V

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Q5. Which of these numbers is one hundred thousand more than 8,946,512?

A. 9,046,512

B. 8,956,512

C. 8,947,512

D. 9,946,512

E. 18,946,512

Q6. Maya was meant to divide a number by 6, but by mistake she multiplied it by 6 and got 216. What should her answer have been?

A. 36 *B.* 210 *C.* 222 *D.* 6 *E.* 1,296

Q7. Which of these rectangles has the same perimeter as a 7 cm by 3 cm rectangle, but a different area?

A. 3 cm by 7 cm

B. 8 cm by 3 cm

C. 5 cm by 4 cm

D. 9 cm by 2 cm

E. 6 cm by 4 cm

Q8. The table shows the first week of a month that has 31 days. How many Saturdays are there in the month?

Mon	Tue	Wed	Thu	Fri	Sat	Sun
			1	2	3	4

A. 3 *B.* 5 *C.* 4 *D.* 6 *E.* 7

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Q9. Five cards show the numbers 3, 7, 7, 9 and 4. One card is taken away, and after that the mode of the cards is no longer 7. Which card was taken away?

A. 3

B. 4

C. 7

D. 9

E. No card could do that

Q10. Sofia's suitcase must weigh no more than 20 kg. It weighs 17.6 kg now. Which one of these could she still pack?

A. a 2,300 g bag of books

B. a 2.5 kg pair of boots

C. a 3,100 g coat

D. a 2 kg 600 g camera bag

E. a 4.1 kg hairdryer

Q11. These numbers go up in equal steps: −14, a, b, −2, c. What is the value of c?

A. −10 *B.* −6 *C.* 4 *D.* 2 *E.* 10

Q12. A plumber charges a fixed call-out fee plus the same amount for every hour worked. A 2-hour job costs £90 and a 5-hour job costs £180. What is the call-out fee?

A. £15 *B.* £36 *C.* £30 *D.* £45 *E.* £60

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Q13. The table shows what five shops charge for bags of potatoes. In which shop is the price in direct proportion to the mass?

Shop	2 kg	4 kg	6 kg
Shop A	£3	£5	£7
Shop B	£4	£6	£8
Shop C	£3	£6	£10
Shop D	£3	£6	£9
Shop E	£2	£5	£8

A. Shop A *B.* Shop B *C.* Shop C *D.* Shop D *E.* Shop E

Q14. Tom's stride is 60 cm long. How many strides does he take to walk 1.5 km?

A. 25 *B.* 250 *C.* 900 *D.* 25,000 *E.* 2,500

Q15. Four prices each round to £5 to the nearest pound. Which of these could NOT be the real total of the four prices?

A. £22.00 *B.* £18.00 *C.* £19.99 *D.* £20.40 *E.* £21.96

Q16. 36 × 24 = 864. Use this fact to work out 36 × 25.

A. 865 *B.* 888 *C.* 889 *D.* 900 *E.* 1,764

Q17. Lucy is 7th from the front of a queue and 12th from the back. How many people are in the queue?

A. 5 *B.* 18 *C.* 17 *D.* 19 *E.* 20

Q18. The numbers 0.6, 0.66, 0.606, 0.066 and 0.65 are put in order of size. Which number is in the middle?

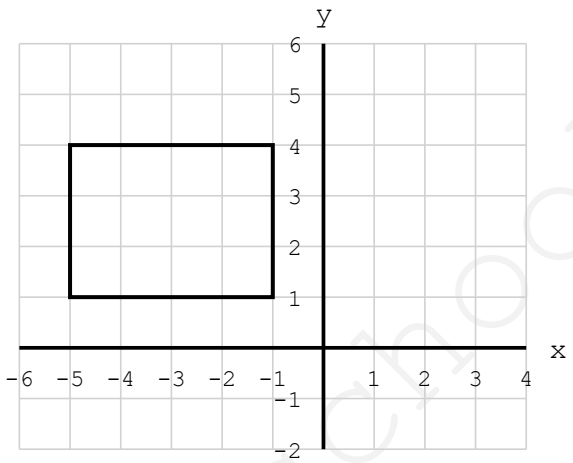
A. 0.6 *B.* 0.66 *C.* 0.606 *D.* 0.066 *E.* 0.65

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Q19. Nadia is facing north-east. She turns clockwise until she is facing south. How many degrees has she turned?

A. 45° *B.* 90° *C.* 180° *D.* 225° *E.* 135°

Q20. Which of these points lies inside the rectangle drawn on the grid?



A. (−2, 5) *B.* (−3, 2) *C.* (−6, 3) *D.* (0, 2) *E.* (−3, −1)

Q21. Sam got 3/4 of the 24 questions in a quiz right. How many more questions would he have needed to get right to score at least 90%?

A. 2 *B.* 3 *C.* 4 *D.* 5 *E.* 22

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Q22. The table shows how long four swimmers took to swim one length. How much faster was the fastest swimmer than the slowest?

Swimmer	Time
Ali	1 min 23.4 s
Ben	58.9 s
Cara	1 min 2.5 s
Dan	1 min 0.8 s

A. 22.6 seconds

B. 25.5 seconds

C. 35.5 seconds

D. 64.5 seconds

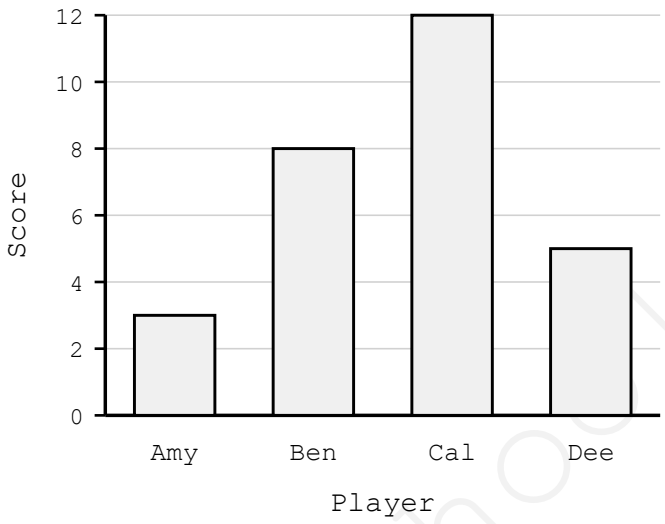
E. 24.5 seconds

Q23. A tortoise walks at a steady 3 metres per minute. What is its speed in kilometres per hour?

A. 0.18 km/h *B.* 0.05 km/h *C.* 0.3 km/h *D.* 1.8 km/h *E.* 18 km/h

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Q24. The bar chart shows four players' scores. A fifth player joins, and the range of all five scores is the same as the range of the first four. Which of these could the fifth player's score be?



A. 1 *B.* 2 *C.* 13 *D.* 7 *E.* 15

Q25. A square photo measures 12 cm by 12 cm. It is cut into 4 identical rectangles, each as long as the photo. What is the perimeter of one of the rectangles?

A. 30 cm *B.* 15 cm *C.* 24 cm *D.* 36 cm *E.* 48 cm

Q26. Which of these numbers is 2 more than a square number AND 2 less than a cube number?

A. 27 *B.* 51 *C.* 62 *D.* 123 *E.* 66

Q27. A robot starts at (0, 0). Its moves are 1 right, 2 up, 3 right, 4 up, 5 right, 6 up, and so on. Where is it after 10 moves?

A. (16, 20) *B.* (25, 30) *C.* (25, 25) *D.* (30, 25) *E.* (36, 30)

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Q28. Ann and Bo share £60 in the ratio 2 : 3. Then Bo gives Ann £6. What is the ratio of Ann's money to Bo's money now?

A. 2 : 3 *B.* 3 : 2 *C.* 1 : 1 *D.* 4 : 5 *E.* 5 : 4

Q29. Pens are sold in packs of 6 and packs of 8. Leo wants exactly 50 pens. What is the smallest number of packs he can buy?

A. 6 *B.* 8 *C.* 9 *D.* 10 *E.* 7

Q30. The number 5?72 has one digit missing. The number is a multiple of 9. What is the missing digit?

A. 4 *B.* 2 *C.* 5 *D.* 7 *E.* 9

Q31. An orange drink is 20% juice. Tom mixes 300 ml of it with 100 ml of pure orange juice. What percentage of the new drink is juice?

A. 20% *B.* 25% *C.* 40% *D.* 45% *E.* 60%

Q32. The table shows the midday temperature on each day of one week. On how many days was the temperature below the mean temperature for the week?

Mon	Tue	Wed	Thu	Fri	Sat	Sun
−3°C	2°C	−5°C	0°C	−1°C	4°C	−4°C

A. 2 *B.* 3 *C.* 4 *D.* 5 *E.* 7

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Q33. At an airport, a moving walkway 100 m long moves at 1 m/s. Jo walks along it, in the same direction, at 1.5 m/s. How long does she take to reach the end?

A. 67 seconds

B. 100 seconds

C. 200 seconds

D. 40 seconds

E. 250 seconds

Q34. A counter starts at (−7, 8). Each move takes it 2 squares to the right and 3 squares down. After how many moves is it first in the bottom-right quadrant?

A. 2 *B.* 3 *C.* 5 *D.* 8 *E.* 4

Q35. Sound travels at 340 metres per second. Maya hears thunder 9 seconds after she sees the lightning, which reaches her almost at once. How far away is the storm?

A. 3.06 km *B.* 37.8 m *C.* 306 m *D.* 349 m *E.* 30.6 km

Q36. In the calculation A3 × 7 = 4B1, the letters A and B stand for missing digits. What is A + B?

A. 8 *B.* 10 *C.* 9 *D.* 11 *E.* 12

Q37. Each of the digits 2, 4, 6 and 8 is used once to make two 2-digit numbers. What is the largest possible product of the two numbers?

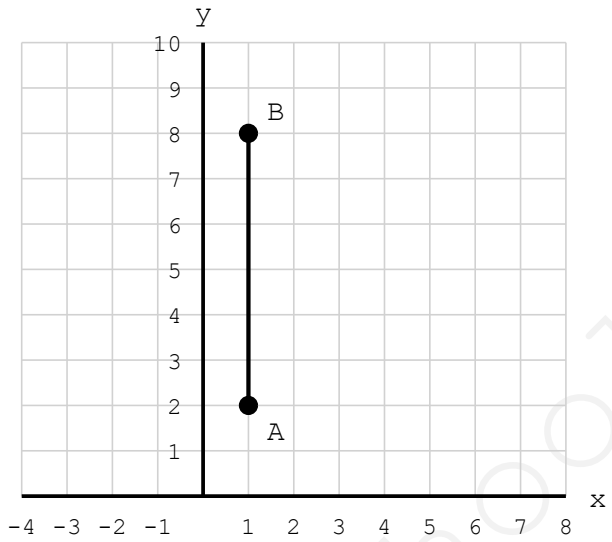
A. 2,976 *B.* 3,612 *C.* 5,248 *D.* 4,592 *E.* 5,208

Q38. A digital clock shows 14:48. How many minutes pass before its four digits next read the same forwards and backwards?

A. 3 *B.* 52 *C.* 67 *D.* 73 *E.* 63

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Q39. One side of a rectangle joins A (1, 2) to B (1, 8), as shown. The perimeter of the rectangle is 20 units. Which of these could be another corner of the rectangle?



A. (3, 8) *B.* (4, 2) *C.* (1, 12) *D.* (5, 8) *E.* (7, 2)

Q40. What do all the whole numbers from −10 to 12 add up to?

A. 0 *B.* 2 *C.* 22 *D.* 33 *E.* 23

Q41. A frog is at the bottom of a well 10 m deep. Each day it climbs up 3 m, and each night it slips back down 2 m. On which day does it first reach the top?

A. the 5th day

B. the 7th day

C. the 8th day

D. the 9th day

E. the 10th day

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Q42. A square with sides of 5 cm and a square with sides of 3 cm are placed side by side, touching along one edge, with their bottom edges in line. What is the perimeter of the new shape?

A. 16 cm *B.* 26 cm *C.* 22 cm *D.* 28 cm *E.* 32 cm

Q43. Five whole numbers have a mode of 4, a median of 6, a mean of 7 and a range of 10. What is the second largest of the five numbers?

A. 7 *B.* 6 *C.* 9 *D.* 11 *E.* 14

Q44. Which of these numbers can NOT be written as the sum of two prime numbers?

A. 20 *B.* 21 *C.* 25 *D.* 27 *E.* 31

Q45. Two of the angles in an isosceles triangle differ by 30°. Which of these could be the size of its largest angle?

A. 50° *B.* 60° *C.* 80° *D.* 90° *E.* 100°

Q46. 3 hens lay 3 eggs in 3 days. At the same rate, how many eggs do 6 hens lay in 6 days?

A. 6 *B.* 9 *C.* 18 *D.* 36 *E.* 12

Q47. Five planks are each 2.4 m long, measured to the nearest 0.1 m. They are laid end to end. What is the shortest their total length could be?

A. 11.5 m *B.* 11.95 m *C.* 12 m *D.* 11.75 m *E.* 12.25 m

Q48. A lorry can carry at most 3.5 tonnes. It is already carrying 1,200 kg of sand. How many 25 kg bags of cement can it also carry?

A. 48 *B.* 92 *C.* 88 *D.* 140 *E.* 920

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Q49. In a class, 40% of the pupils are boys. 25% of the boys and 50% of the girls have a pet. What percentage of the whole class have a pet?

A. 25% *B.* 30% *C.* 40% *D.* 37.5% *E.* 75%

Q50. Which number n makes n ÷ 2 + 9 equal to n × 2?

A. 6 *B.* 3 *C.* 4.5 *D.* 9 *E.* 18

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