Maths Mock Test Paper 29

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 lift rises at a steady 3 metres every 2 seconds. How long does it take to rise 45 metres?

A. 15 seconds

B. 22.5 seconds

C. 45 seconds

D. 135 seconds

E. 30 seconds

Q2. Egg boxes hold 6 eggs each. Sam has 50 eggs. How many more eggs does he need to fill one more box?

A. 2 *B.* 4 *C.* 6 *D.* 8 *E.* 9

Q3. a = 7. Which of these expressions has a value of 20?

A. 3a − 1 *B.* 2a + 4 *C.* 4a − 6 *D.* a + 14 *E.* 5a − 16

Q4. A rectangle is made from 12 squares, each 1 cm by 1 cm. Its perimeter is 14 cm. How long is its longer side?

A. 2 cm *B.* 4 cm *C.* 3 cm *D.* 6 cm *E.* 12 cm

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Q5. Which of these holds the most water altogether?

A. 5 cups of 450 ml

B. a 2 litre bottle

C. 3 cans of 330 ml

D. a 1.8 litre jug

E. 8 glasses of 240 ml

Q6. Which of these numbers rounds to the same whole number as 6.5?

A. 6.49 *B.* 7.5 *C.* 6.05 *D.* 5.99 *E.* 7.49

Q7. Ben says that 51 is a prime number. Which of these shows that he is wrong?

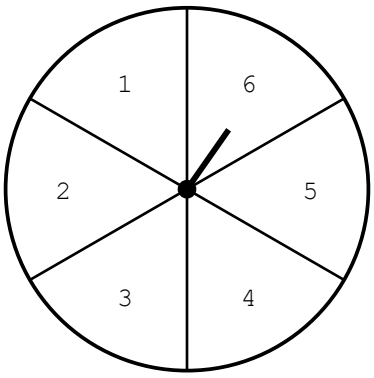
A. 5 × 11 *B.* 7 × 7 *C.* 3 × 17 *D.* 2 × 25 *E.* 4 × 13

Q8. A hundred square has 0.3 of its squares shaded red and 25% of its squares shaded blue. How many squares are not shaded?

A. 45 *B.* 28 *C.* 55 *D.* 70 *E.* 75

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Q9. The spinner is spun once. Which of these results is impossible?



A. an even number

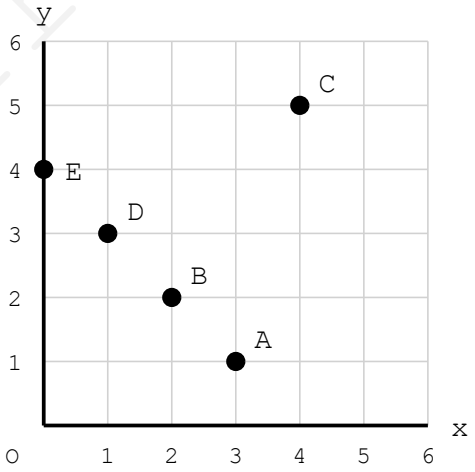
B. a number less than 7

C. a multiple of 3

D. an odd number

E. a 7

Q10. Which point on the grid has a y-coordinate that is 2 more than its x-coordinate?



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

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Q11. Three whole numbers in a row, such as 4, 5 and 6, multiply together to make 210. What do the three numbers add up to?

A. 15 *B.* 18 *C.* 21 *D.* 24 *E.* 70

Q12. p = 3q, q = 2r and r = 4. What is the value of p + q + r?

A. 9 *B.* 12 *C.* 24 *D.* 36 *E.* 32

Q13. The table shows the scores of five players in three games. Which player has the highest mean score?

Player	**Game 1**	**Game 2**	**Game 3**
Ann	5	7	9
Bo	8	8	5
Cy	10	2	6
Dee	6	9	7
Ed	4	11	6

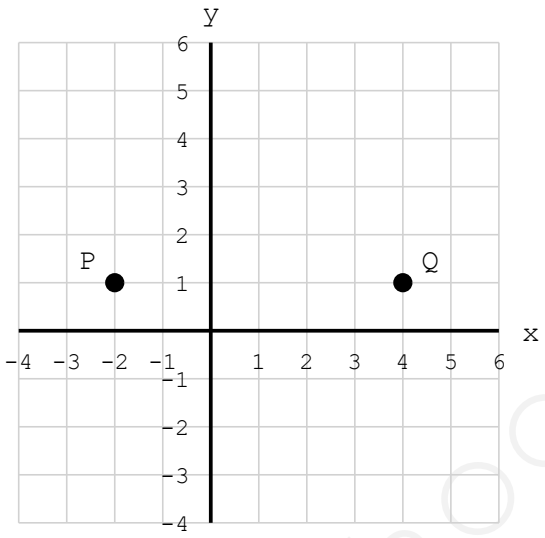
A. Ann *B.* Bo *C.* Cy *D.* Dee *E.* Ed

Q14. A café offers 3 starters, 4 main courses and 2 desserts. A meal is one starter, one main course and one dessert. How many different meals are possible?

A. 9 *B.* 12 *C.* 24 *D.* 36 *E.* 48

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Q15. P and Q are two corners of a rectangle. The rectangle has an area of 24 square units. Which of these could be another of its corners?



A. (−2, 4) *B.* (4, 3) *C.* (1, 5) *D.* (4, 5) *E.* (4, −4)

Q16. How many whole numbers round to 3,000 when they are rounded to the nearest hundred?

A. 49 *B.* 100 *C.* 99 *D.* 101 *E.* 1,000

Q17. A square is cut in half to make two identical rectangles. Each rectangle has a perimeter of 30 cm. What is the area of the square?

A. 50 cm² *B.* 56.25 cm² *C.* 150 cm² *D.* 225 cm² *E.* 100 cm²

Q18. In a bag, 2 out of every 9 sweets are red. There are 14 red sweets. How many sweets in the bag are NOT red?

A. 49 *B.* 35 *C.* 56 *D.* 63 *E.* 126

Q19. Which of these numbers is 5 tenths more than 2.97?

A. 2.975 *B.* 3.47 *C.* 3.02 *D.* 3.07 *E.* 7.97

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Q20. A shape is turned a quarter turn clockwise, then a half turn, then another quarter turn clockwise. Which single turn would have the same effect?

A. a quarter turn clockwise

B. a half turn

C. a three-quarter turn clockwise

D. a full turn, so it is back where it started

E. a quarter turn anticlockwise

Q21. A road has a speed limit of 30 miles per hour. A car takes 1 minute 30 seconds to drive exactly 1 mile along it. Which of these is true?

A. It is over the limit by 10 mph

B. It is under the limit by 10 mph

C. It is exactly at the limit

D. It is over the limit by 30 mph

E. It is under the limit by 20 mph

Q22. What is 0.2 + 1/4 + 30%, written as a decimal?

A. 0.33 *B.* 0.525 *C.* 0.75 *D.* 0.57 *E.* 1.05

Q23. The numbers −8, 6, −3 and 1 are split into two pairs, so that both pairs add up to the same total. What is that total?

A. −11 *B.* −7 *C.* 2 *D.* 7 *E.* −2

Q24. A car's fuel tank holds 48 litres when full. The fuel gauge shows that the tank is 3/8 full. How many litres are needed to fill it?

A. 18 litres *B.* 24 litres *C.* 32 litres *D.* 30 litres *E.* 45 litres

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Q25. Which pair of numbers are both square numbers and add up to 100?

A. 25 and 75 *B.* 49 and 51 *C.* 36 and 64 *D.* 16 and 84 *E.* 50 and 50

Q26. It takes 10 minutes to saw a log into 6 pieces. At the same rate, how long would it take to saw an identical log into 12 pieces?

A. 11 minutes

B. 22 minutes

C. 12 minutes

D. 20 minutes

E. 24 minutes

Q27. A video lasts 1 hour 12 minutes. Sam watches it at 1.5 times the normal speed. How long does it take him to watch it?

A. 48 minutes

B. 36 minutes

C. 58 minutes

D. 1 hour 8 minutes

E. 1 hour 48 minutes

Q28. A ladder leans against a vertical wall, standing on flat ground. The ladder makes an angle of 70° with the ground. What angle does it make with the wall?

A. 70° *B.* 90° *C.* 110° *D.* 160° *E.* 20°

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Q29. How long is 10,000 seconds, in hours, minutes and seconds?

A. 1 hour 40 minutes

B. 2 hours 40 minutes

C. 2 hours 16 minutes 40 seconds

D. 2 hours 46 minutes 40 seconds

E. 166 hours 40 minutes

Q30. A post office has only 3p and 5p stamps, but plenty of each. What is the largest amount of postage that can NOT be made exactly from these stamps?

A. 1p *B.* 4p *C.* 7p *D.* 8p *E.* 11p

Q31. A pentagon has three right angles. Its other two angles are equal. What is the size of each of those two angles?

A. 90° *B.* 135° *C.* 108° *D.* 120° *E.* 270°

Q32. What is the next number in this sequence?

−5, −2, 4, 16, 40, …

A. 88 *B.* 56 *C.* 64 *D.* 72 *E.* 80

Q33. In the time Amy walks 3 km, Ben walks 4 km. They start 21 km apart and walk towards each other at the same moment. How far has Amy walked when they meet?

A. 7 km *B.* 10.5 km *C.* 12 km *D.* 15.75 km *E.* 9 km

Q34. How many three-digit numbers have only odd digits?

A. 100 *B.* 150 *C.* 250 *D.* 125 *E.* 450

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Q35. A perfect number is equal to the sum of its factors, not counting itself. For example, the factors of 6 other than 6 are 1, 2 and 3, which add up to 6. Which of these is a perfect number?

A. 12 *B.* 18 *C.* 28 *D.* 24 *E.* 30

Q36. Priya estimates each of these products by rounding both numbers to the nearest 10. For which one is her estimate SMALLER than the exact answer?

A. 38 × 62 *B.* 36 × 64 *C.* 45 × 55 *D.* 38 × 58 *E.* 43 × 57

Q37. What is 999 × 999?

A. 998,001 *B.* 989,001 *C.* 998,999 *D.* 999,001 *E.* 1,000,000

Q38. A robot starts at (0, 0), facing up the y-axis. It follows these instructions: forward 2 squares, turn right, forward 3 squares, turn right, forward 1 square. Where does it finish?

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

Q39. A large cube is built from 27 small cubes. One small cube is taken away from a corner. What happens to the surface area of the shape?

A. It goes down by 3 faces of a small cube

B. It goes down by 1 face of a small cube

C. It stays the same

D. It goes up by 3 faces of a small cube

E. It goes up by 6 faces of a small cube

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Q40. Jo needs 8 pieces of ribbon, each 55 cm long. Ribbon is sold in rolls of 1.5 m, and each piece must be cut from a single roll. How many rolls must she buy?

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

Q41. As a decimal, 1/7 is 0.142857142857…, with the six digits 142857 repeating for ever. What is the 20th digit after the decimal point?

A. 1 *B.* 2 *C.* 5 *D.* 7 *E.* 4

Q42. A school term starts on Monday 2 September. It lasts exactly 15 weeks and finishes on a Friday. On what date does the term finish?

A. Friday 15 November

B. Friday 6 December

C. Friday 13 December

D. Monday 16 December

E. Friday 20 December

Q43. $1 = 1 \times 1$, $1 + 3 = 2 \times 2$ and $1 + 3 + 5 = 3 \times 3$. Using this pattern, what is $1 + 3 + 5 + \ldots + 29$?

A. 196 *B.* 225 *C.* 256 *D.* 435 *E.* 450

Q44. A prism has 18 edges. How many faces does it have?

A. 6 *B.* 9 *C.* 12 *D.* 8 *E.* 18

Q45. 18-carat gold is 18 parts gold to 6 parts other metals. An 18-carat gold ring weighs 6 g. How much gold does it contain?

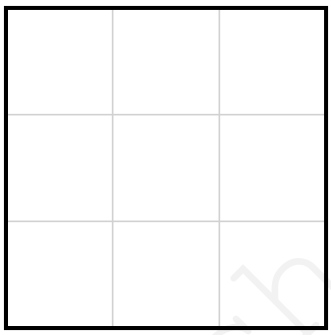
A. 1.5 g *B.* 3 g *C.* 4.5 g *D.* 4 g *E.* 5 g

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Q46. Two cyclists 20 km apart ride towards each other, one at 12 km/h and the other at 8 km/h. A fly starts at one cyclist and flies back and forth between them at 30 km/h until they meet. How far does the fly travel?

A. 30 km *B.* 10 km *C.* 20 km *D.* 50 km *E.* 60 km

Q47. How many squares of any size can be found in a grid of 3 squares by 3 squares, like the one shown?



A. 9 *B.* 10 *C.* 13 *D.* 14 *E.* 16

Q48. What is the smallest whole number whose digits add up to 20?

A. 389 *B.* 299 *C.* 479 *D.* 992 *E.* 1,199

Q49. The mean of 10 test marks was worked out as 14. Then it was found that one mark had been copied as 17 when it should have been 7. What is the correct mean?

A. 12 *B.* 13.5 *C.* 14 *D.* 15 *E.* 13

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Q50. At the start of Monday a pond's water was at its normal level. The table shows how the level changed each day. At the end of which day was the level lowest?

Day	Change in level
Monday	up 3 cm
Tuesday	down 6 cm
Wednesday	down 2 cm
Thursday	up 4 cm
Friday	down 1 cm

A. Monday *B.* Tuesday *C.* Wednesday *D.* Thursday *E.* Friday

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