

Questions Only

Day 1 – Number & Place Value GD

1. I am a 5-digit number. My ten-thousands digit is 4, the thousands digit is half the ten-thousands digit, the hundreds digit is 7, tens digit is double the ones digit. Who am I?
2. Round 86,374 to the nearest 1,000 and 10,000. Explain the difference.
3. The number 72,495 is rounded to the nearest 100. What is it? What if rounded to the nearest 1,000?
4. Order these numbers from largest to smallest: 35,472; 35,427; 35,742; 35,724. Explain your reasoning.
5. Find all multiples of 9 between 50 and 100.
6. Convert 0.875 into a fraction and a percentage.
7. Identify all prime numbers between 30 and 50.
8. A number is increased by 12,345 to make 56,789. What is the original number?
9. $8,003 - ? = 6,827$. Find the missing number.
10. How many hundreds are in 47,320? Show your method.

Day 2 – Calculations GD

11. A shop sold 1,245 pencils on Monday and 2,378 on Tuesday. How many pencils sold altogether?
12. From 10,000 cookies, 3,478 were eaten. How many are left?
13. Multiply 245×36 using a written method.
14. Divide $3,456 \div 24$ and explain your reasoning.
15. Solve $4 \times (72 + 18)$ and show your method.
16. Subtract $5,678 - 3,245$.
17. Multiply 325×24 and explain your method.
18. Divide $12,540 \div 15$.
19. Add $12.45 + 7.68$ and explain your method.
20. Subtract $15.75 - 8.36$ using a written method.

Day 3 – Fractions, Decimals & Percentages GD

21. Write $\frac{7}{8}$ as a decimal and percentage.
22. Find 30% of 360.
23. Simplify $\frac{48}{64}$ and explain the steps.
24. Add $\frac{5}{6} + \frac{7}{12}$ and show working.
25. Subtract $\frac{11}{15} - \frac{2}{5}$.
26. Convert 0.875 to a fraction.
27. 18 is what fraction of 72?
28. 65% of 240 = ? Show method.

29. Order these decimals: 0.875, 0.58, 0.805, 0.7
30. Convert $\frac{7}{8}$ to a percentage.

Day 4 – Ratio, Proportion & Algebra GD

31. The ratio of boys to girls is 5:4. There are 36 girls. How many boys?
32. Solve $3x + 7 = 22$.
33. Solve $7x - 5 = 23$.
34. $a:b = 4:7$, $a = 32$. Find b .
35. Write an expression for 'triple a number n minus 5'.
36. Solve $5y + 12 = 47$.
37. The ratio of cats to dogs is 7:3. There are 12 cats. How many dogs?
38. 5 pencils cost £3.60. How much for 12 pencils?
39. Simplify $7x + 3x - 9$.
40. Solve $3(x + 5) - 7 = 14$.

Day 5 – Measurement & Geometry GD

41. Convert 5.25 km to metres.
42. A rectangle has length 14 cm and width 9 cm. Find perimeter.
43. Area of triangle with base 12 cm, height 8 cm.
44. Convert 4 hours 50 minutes to minutes.
45. Volume of cuboid 5 cm \times 6 cm \times 8 cm.
46. Two angles of triangle are 65° and 50° . Find third angle.
47. Draw all lines of symmetry for a regular hexagon.
48. Convert 3,750 ml to litres.
49. Find mean, median, and mode of 4, 7, 8, 10, 12, 8.
50. Perimeter and area of square with side 15 cm.

Day 6 – Statistics & Problem Solving GD

51. A bag contains 7 red, 9 blue, 4 green marbles. Total marbles?
52. Bag contains 5 red, 3 blue, 2 yellow sweets. Fraction red?
53. Mode of 12, 15, 12, 18, 12, 15, 19
54. Median of 6, 9, 12, 15, 18, 21
55. 8 pens cost £6.40. Cost of 15 pens?
56. A car travels 240 km in 3 hours. Average speed?
57. Draw pictogram for apples 4, bananas 6, oranges 3.
58. $\pounds 48 \div 6 = ?$ per child
59. Shop sells 24 notebooks/day. How many in 2 weeks?
60. Spinner has 12 sections, 5 red. Probability red?

Day 7 – Mixed Greater Depth Reasoning SATs

61. $\frac{5}{6}$ of a number is 30. Find number.
62. Solve $4x + 9 = 37$.

63. Round 12,478 to nearest 100, 1,000, 10,000.
 64. 18% of £250. Show working.
 65. Bag weighs 3.7 kg and another 4.25 kg. Total?
 66. Solve $12 \times 8 + 48 \div 6$.
 67. $144 \div ? = 12$. Find missing number.
 68. Triangle angles ratio 3:4:5. Find all angles.
 69. How many mm in 4.25 m?
 70. Rectangle length 18 cm, width 9 cm. Find area and perimeter.

Answers Only (Greater Depth Reasoning)

Day 1: 1. 4,275 2. 86,000; 90,000 3. 72,500; 72,000 4. 35,742; 35,724; 35,472; 35,427
 5. 54, 63, 72, 81, 90, 99 6. $\frac{7}{8}$; 87.5% 7. 31, 37, 41, 43, 47 8. 44,444 9. 1,176 10. 473
 hundreds

Day 2: 11. 3,623 12. 6,522 13. 8,820 14. 144 15. 360 16. 2,433 17. 7,800 18. 836 19.
 20.13 20. 7.39

Day 3: 21. 0.875; 87.5% 22. 108 23. $\frac{3}{4}$ 24. 1 $\frac{1}{12}$ or $\frac{13}{12}$ 25. $\frac{1}{3}$ 26. $\frac{7}{8}$ 27. $\frac{1}{4}$ 28.
 156 29. 0.58, 0.7, 0.805, 0.875 30. 87.5%

Day 4: 31. 45 32. 5 33. 4 34. 56 35. $3n - 5$ 36. 7 37. 5 38. £8.64 39. $10x - 9$ 40. 8

Day 5: 41. 5,250 m 42. 46 cm 43. 48 cm^2 44. 290 minutes 45. 240 cm^3 46. 65° 47. 6
 lines 48. 3.75 L 49. Mean: 8.17, Median: 8, Mode: 8 50. Perimeter: 60 cm, Area: 225 cm^2

Day 6: 51. 20 52. $\frac{1}{2}$ 53. 12 54. 13.5 55. £12 56. 80 km/h 57. Proportional symbols 58.
 £8 59. 336 notebooks 60. $\frac{5}{12}$

Day 7: 61. 36 62. 7 63. 12,500; 12,000; 10,000 64. £45 65. 7.95 kg 66. 102 67. 12 68.
 54° , 72° , 90° 69. 4,250 mm 70. Area: 162 cm^2 , Perimeter: 54 cm