Maths Mock Test Paper 2 Answers

Q#	Answer	Explanation
1	C	Cubing means multiplying a number by itself three times: $2 \times 2 \times 2 = 8$.
2	D	3/10 means 3 tenths. The tenths column is the first digit after the decimal point, so 3/10 = 0.3.
3	D	The range is the largest number take away the smallest. The largest is 19 and the smallest is 3, so the range is $19 - 3 = 16$.
4	B	"3 less than" means count back 3 from −2: −3, −4, −5.
5	E	A regular shape has one line of symmetry for each side. A regular hexagon has 6 sides, so it has 6 lines of symmetry.
6	A	February has 28 days, or 29 in a leap year. April, June, September and November each have 30.
7	D	Multiply the three measurements: $8 \times 3 \times 2 = 48$ cm^3.
8	B	To find out how many hundreds fit into a number, divide it by 100. $45{,}000 \div 100 = 450$. There are 450 hundreds in 45,000.
9	D	Go up from 3 on the x-axis until you reach the line, then across to the y-axis. You arrive at 5, which agrees with $3 + 2 = 5$.
10	B	30 minutes is half an hour, so the bus travels half of 40 km, which is 20 km.
11	C	Rearranging, the missing number is $144 \div 9 = 16$. Check: $144 \div 16 = 9$.
12	A	The mode is the score that happened most often. Scoring 1 goal happened in 7 matches, more than any other score, so the mode is 1 goal.
13	D	To round 98.7 to the nearest 10, look at the units digit (8). Since $8 \geq 5$, we round up the tens digit: $9 \rightarrow 10$, which carries over. $98.7 \rightarrow 100$ minutes.

14	C	5 minutes is 300 seconds, so the speed is 1500 ÷ 300 = 5 metres per second.
15	C	In 3.487, the tenths digit is 4, the hundredths digit is 8, and the thousandths digit is 7.
16	D	47 has only the factors 1 and 47. The others are even (42, 44, 48) or divide by 5 (45).
17	C	The sequence goes up in 8s. From the 1st to the 15th term there are 14 steps, so 3 + 14 × 8 = 115.
18	D	The range is the highest minus the lowest: 3 − (−11) = 3 + 11 = 14 degrees.
19	B	Read down the Thu column: the 1st, 8th, 15th, 22nd and 29th. The first is the 1st and the third is the 15th.
20	A	7 tenths = 0.7 and 5 hundredths = 0.05. Together they make 0.75.
21	C	2 litres is 2000 ml, so the number of glasses is 2000 ÷ 250 = 8.
22	B	There are 12 + 9 + 7 + 8 = 36 pupils in total, and the 8 written outside the circles have neither. That is 8 out of 36, and dividing both numbers by 4 gives 2/9.
23	E	The three corners given are each 3 squares from the centre (4, 4): one below, one right and one above. The missing corner is 3 squares to the left of the centre, at (1, 4).
24	E	As decimals: 11/20 = 0.55, 0.6, 0.61, 62% = 0.62 and 5/8 = 0.625. The largest is 0.625, which is 5/8.
25	C	Adding 199 is the same as adding 200 then taking away 1: 348 + 200 = 548, and 548 − 1 = 547.
26	E	355 has a units digit of 5 (≥ 5), so it rounds up to 360, not 350. All others (345–354) round to 350.
27	B	Divide the amount by the time: 12 ÷ 4 = 3 litres each minute.
28	C	The exterior angles of any polygon add up to 360°. A regular pentagon has 5 equal exterior angles, so each is 360° ÷ 5 = 72°.

29	D	Squaring means multiplying a number by itself: 12 × 12 = 144.
30	D	Multiply the number of pounds by the exchange rate: 40 × 1.15 = 46 euros.
31	B	From 8 pm to 2 am is 6 hours, which is three lots of 2 hours, so the fall is 3 × 3 = 9 degrees. 2 − 9 = −7.
32	B	From 08:47 to 10:47 is 2 hours, and from 10:47 to 11:12 is 25 more minutes, making 2 hours 25 minutes.
33	A	The £20 joining fee is paid once, and the monthly charge is 8 for each month, which is 8m, giving 20 + 8m.
34	C	The next bus is at 14:05 and the one after that is 25 minutes later at 14:30. From 13:40 to 14:30 is 50 minutes, which is 2 × 25.
35	D	4 m is 8 tiles long and 3 m is 6 tiles wide, so 8 × 6 = 48 tiles are needed.
36	B	Four numbers with a mean of 8 add up to 4 × 8 = 32. The three known numbers give 4 + 7 + 10 = 21, so x is 32 − 21 = 11.
37	A	The first three significant figures are 7, 0, and 0. The next digit is 4 (< 5), so we round down. 7.0049 → 7.00 (keeping the zeros to show 3 significant figures).
38	A	Multiplying by 100 moves digits two places to the left.
39	B	The angles lie on a straight line, so (x + 15°) + 2x + (3x + 15°) = 180°. Collecting terms gives 6x + 30° = 180°, so 6x = 150° and x = 25°.
40	C	If all 12 tickets were for children the cost would be £60. Each adult ticket adds £3, and the extra is £21, so there are 21 ÷ 3 = 7 adult tickets.
41	D	2/3 ≈ 0.6667. The values are 7/11 ≈ 0.636, 0.65, 0.66, 0.667 and 0.68. The difference for 0.667 is only about 0.0003, which is the smallest.
42	D	When lengths are in the ratio 2 : 5, areas are in the ratio 2^2 : 5^2 = 4 : 25. Since 12 ÷ 4 = 3, the larger area is 25 × 3 = 75 cm^2.

43	C	The original area is 6 × 6 = 36 cm² and the new area is 12 × 12 = 144 cm². Since 144 ÷ 36 = 4, the area is 4 times bigger.
44	B	Divide the area by the coverage: 54 ÷ 12 = 4.5 litres.
45	C	The temperature must rise from −5°C to 3°C, which is 8 degrees. At 2 degrees per hour that takes 4 hours, so it reaches 3°C at 10 am.
46	C	Division comes before subtraction: 144 ÷ 6 = 24, then 24 − 12 = 12.
47	A	Train Y leaves Gatwick at 10:57 and reaches Brighton at 11:38. From 10:57 to 11:38 is 41 minutes.
48	D	Expand both sides: 3x − 12 = 2x + 2. Take 2x from both sides: x − 12 = 2, so x = 14.
49	C	2 minutes is 120 seconds, so the distance is 30 × 120 = 3600 m.
50	C	Divide both sides by 3: x = −21 ÷ 3 = −7, because a negative divided by a positive is negative.