Number Properties: Medium Practice Paper 1 Answers

Q#	Answer	Explanation
1	C	The factors of 12 are 1, 2, 3, 4, 6, 12 and the factors of 18 are 1, 2, 3, 6, 9, 18. The largest number in both lists is 6.
2	C	Multiples of 4: 4, 8, 12, 16, ... Multiples of 6: 6, 12, 18, ... The smallest number in both lists is 12.
3	C	The factors of 24 are 1, 2, 3, 4, 6, 8, 12 and 24. Counting them gives 8 factors.
4	C	61 has only the factors 1 and 61. The others all divide by 3: 51 = 3 × 17, 57 = 3 × 19, 63 = 3 × 21 and 69 = 3 × 23.
5	D	Squaring means multiplying a number by itself: 12 × 12 = 144.
6	B	The square root asks which number multiplied by itself gives 121. Since 11 × 11 = 121, the square root is 11.
7	C	A number divides by 6 if it is even and its digits add to a multiple of 3. 138 is even and 1 + 3 + 8 = 12, so it works: 138 ÷ 6 = 23.
8	C	This is the lowest common multiple of 6 and 8. Multiples of 6: 6, 12, 18, 24. Multiples of 8: 8, 16, 24. They meet again after 24 seconds.
9	C	The number of packs must divide both 48 and 36, so it is their highest common factor. The largest number dividing both is 12, giving 4 pencils and 3 rubbers per pack.
10	C	Counting up 8 from −8 reaches 0, and there are 7 more to count, so the answer is 7.
11	C	The first five primes are 2, 3, 5, 7 and 11. Adding them: 2 + 3 + 5 + 7 + 11 = 28. Remember that 1 is not prime.
12	D	Cubing means multiplying a number by itself three times: 4 × 4 × 4 = 64.

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13	E	The number of tiles must be a square number. 100 = 10 × 10, so it makes a square with 10 tiles along each side.
14	D	54 ÷ 6 = 9 and 54 ÷ 9 = 6, so it is a multiple of both. 24 is a multiple of 6 only, and 27, 45 and 63 are multiples of 9 only.
15	D	The multiples of 12 are 12, 24, 36, 48, 60, ... Since 12 × 5 = 60, the answer is 60.

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