Number Properties: Medium Practice Paper 5 Answers

Q#	Answer	Explanation
1	C	The factors of 30 are 1, 2, 3, 5, 6, 10, 15, 30 and the factors of 42 are 1, 2, 3, 6, 7, 14, 21, 42. The largest in both lists is 6.
2	C	Multiples of 9: 9, 18, 27, 36, 45. Multiples of 15: 15, 30, 45. The smallest number in both lists is 45.
3	C	The factors of 48 are 1, 2, 3, 4, 6, 8, 12, 16, 24 and 48. Counting them gives 10 factors.
4	C	The primes are 2, 3, 5, 7, 11, 13, 17 and 19, which is 8 numbers. Remember that 1 is not a prime number.
5	C	Squaring means multiplying a number by itself: 11 × 11 = 121.
6	B	The square root asks which number multiplied by itself gives 400. Since 20 × 20 = 400, the square root is 20.
7	A	108 ÷ 4 = 27 and 108 ÷ 9 = 12, so both work. 126 divides by 9 but not 4, and 132 divides by 4 but not 9.
8	C	This is the lowest common multiple of 15 and 20. Multiples of 15: 15, 30, 45, 60. Multiples of 20: 20, 40, 60. After 60 minutes it is 1:00 pm.
9	D	The number of bags must divide both 84 and 63, so it is their highest common factor. That is 21, giving 4 sweets and 3 chocolates per bag.
10	C	Work from left to right: −9 + 4 = −5, then −5 − 2 = −7.
11	D	49 = 7 × 7, 64 = 8 × 8, 81 = 9 × 9 and 100 = 10 × 10. There is no whole number that multiplies by itself to give 90, since 9 × 9 = 81 and 10 × 10 = 100.
12	D	Cubing means multiplying a number by itself three times: 10 × 10 × 10 = 1,000.

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13	C	The multiples of 7 up to 50 are 7, 14, 21, 28, 35, 42 and 49, which is 7 numbers. The next one, 56, is past 50.
14	B	The factors of 60 are 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 and 60. Of the options, only 12 and 30 are factors, and only 12 is a multiple of 4.
15	B	A square patio has the same number of tiles along each side, so we need the square root of 121. Since 11 × 11 = 121, there are 11 tiles along each side.

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