

## Reasoning

**Letter Series** 

Dottown True	Description Letter Series	Ewamula	Evulouation		
Pattern Type	Description	Example	Explanation		
1. Constant Forward Shift	Each letter moves forward by a fixed number.  A, C, E, G		+2 shift: A(1), C(3), E(5), G(7)		
2. Constant Backward Shift	Each letter moves backward by a fixed number. Z, X, V, T		-2 shift: Z(26), X(24), V(22), T(20)		
3. Alternate Forward & Backward	Pattern alternates between forward and backward shifts.	A, C, B, D, C, E	+2, -1 alternation		
4. Odd Position Letters	Series includes only letters at odd positions in the alphabet.	Series includes only letters at odd positions in the A, C, E, G			
5. Even Position Letters	Series includes only letters at even positions.	B, D, F, H	B(2), D(4), F(6), H(8)		
6. Repetition Series	One or more letters repeat in a fixed pattern.	-			
7. Reverse Series	Letters are listed in reverse alphabetical order. Z, Y, X, W		Z(26), Y(25), X(24), W(23)		
8. Mirror Series	Series reflects around a central point. A, B, C, B, A		Mirror at C		
9. Skipping Letters	One or more letters skipped between each. A, D, G, J		+3 skips each time		
10. Alphabet + Number Mapping	Letters represented with positions, follow a D, G, J, M numerical logic.		D(4), G(7), J(10), M(13): +3		
11. Fixed Group Shift	Whole blocks of letters shift positions.	ABC, DEF, GHI	+3 per group		
12. Rotation within a group	Letters rotate their positions within a group. $ ABC \rightarrow BCA \rightarrow CAB $		Circular shift		
13. Vowel-Consonant Alternation	Alternating vowels and consonants.  A, B, E, F, I, J		Vowel (A, E, I), Consonant (B, F, J)		
14. Coding/Decoding Logic	Letters follow coded shift logic (e.g., +3, -1 etc.).	M, P, S, V	M(13), P(16), S(19), V(22) → +3 logic		
15. Symmetric Series	Beginning and end elements mirror each other.	A, B, C, D, C, B, A	Symmetry around D		
16. Dual Series	Two interleaved letter series.	A, X, B, W, C, V	A, B, C (+1), X, W, V (-1) $\rightarrow$ Two separate series		
17. Increasing Difference	Gap between letters increases regularly.	A, C, F, J	+2, +3, +4		
18. Z-A Reverse Pattern	Letters from the end of the alphabet.	Z, X, V, T	-2 each step		
19. Position-Based Word Letters	Each letter picked from a specific position in a sequence of words.	First letter of each word: CAT, DOG, EGG → C, D, E	Based on position in word		
20. Combination Series	Combination of two or more patterns (e.g., skipping + alternating).	A, C, B, D, C, E	Mix of skip and alternation		

## **Number Series**

Pattern Type	Identification Clue	Logic / Rule	Example
1. Arithmetic Series	Constant difference	Add/Subtract same number	2, 5, 8, 11, 14, <b>17</b> (+3)
2. Geometric Series	Constant	Multiply/Divide by same number	3, 6, 12, 24, <b>48</b> (×2)
	multiplication/division		
3. Square Series	Numbers are perfect squares	Square of natural numbers	1, 4, 9, 16, 25, <b>36</b> (1 <sup>2</sup> , 2 <sup>2</sup> )
4. Cube Series	Numbers are perfect cubes	Cube of natural numbers	1, 8, 27, 64, <b>125</b> (1 <sup>3</sup> , 2 <sup>3</sup> )
5. Alternating Pattern	Every 2nd or 3rd number	Alternate	3, 6, 5, 10, 7, 14, <b>9</b> (+3, -1,
	differs	addition/subtraction/multiplicati	×2)
		on	
6. Prime Number Series	Series of prime numbers	Consecutive primes used	2, 3, 5, 7, 11, <b>13</b>





7. Even/Odd Series	All numbers even or odd	Increase in even/odd numbers	2, 4, 6, 8, <b>10</b> or 1, 3, 5, 7, <b>9</b>
8. Fibonacci Series	Sum of last two terms	Each term = sum of previous two	1, 1, 2, 3, 5, 8, <b>13</b>
9. Mixed Operations	Combo of add, subtract, multiply	Repeating or changing operation	2, 4, 12, 36, <b>108</b> (×2, ×3)
10. Square + Constant	Square of n plus a number	$n^2 + k$ or $n^2 - k$	1, 5, 10, 17, 26, <b>37</b> (1 <sup>2</sup> +0, 2 <sup>2</sup> +1, 3 <sup>2</sup> +1)
11. Cube + Constant	Cube of n plus a number	$n^3 + k$ or $n^3 - k$	1, 9, 35, 91, <b>189</b> (1 <sup>3</sup> +0, 2 <sup>3</sup> +1, 3 <sup>3</sup> +8)
12. Difference of Differences	2nd level difference is	First differences are not equal,	1, 3, 7, 13, 21, <b>31</b> (diffs:
	constant	but their difference is	+2, +4, +6)
13. Position-based Pattern	Involves place value (A=1, B=2)	Pattern based on index or position	1, 4, 9, 16, <b>25</b> (position <sup>2</sup> )
14. Reverse Pattern	Pattern is backward	Decreasing order by logic	100, 50, 25, 12.5, <b>6.25</b> (÷2)
15. Decimal/Fraction Series	Use of decimals or fractions	Multiply or divide by	1, 0.5, 0.25, 0.125, <b>0.0625</b>
		decimal/fraction	(÷2)
16. Exponential Growth	Rapid increase	2 <sup>n</sup> , 3 <sup>n</sup> , etc.	2, 4, 8, 16, 32, <b>64</b>
17. Multiples of N	All terms are divisible by a number	Multiple of fixed number	5, 10, 15, 20, <b>25</b> (×5)
18. Double Series (Two Series	Two patterns interleaved	Alternate terms follow different	1, 4, 2, 8, 3, 16, 4 (+1 and
Combined)		rules	×2)

Alpha-Numeric Series

Alpha-Numeric Series				
Pattern Type	Description	What to Observe	Example	
1. Letter-Number-Symbol	Fixed cycle of letters, numbers, and	Identify the recurring unit.	A1@ B2# C3\$ D4% →	
Repeat Pattern	symbols.		Pattern: [Letter + Number + Symbol]	
2. Symbol Pattern	Symbols inserted at fixed positions	Look for every 2nd, 3rd, or	A#B C#D E#F → # after	
	or alternated.	even/odd pattern.	every letter pair	
3. Alternate Letter-Number	Alternating between letters and	See sequence of positions	A 1 C 3 E 5 $\rightarrow$ Odd position	
	numbers.	(A=1).	letters and numbers	
4. Repetition Pattern	Some elements are repeated at	Count frequency and	A1B A2C A3D → 'A'	
	fixed intervals.	positions.	re <mark>pea</mark> ted every 3 units	
5. Coding Based on Position	Element's code is its position or	Match index position in	3rd element = C, C $\rightarrow$ 3	
	reverse.	series.		
6. Mixed Logic (Alpha +	Combination pattern involving all.	Decode letters, values, and	B2@ D4# F6\$ →	
Num + Sym)		positions together.	Letter+Even	
			Number+Symbol	
7. Increasing Length	Number of elements in a block	Observe group sizes.	A1, B2C3, D4E5F6 →	
Pattern	increase/decrease.		Elements in 1, 2, 3 format	









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