

Types of Series

Tuesday, June 22, 2021 10:31 AM

(i) Prime Series
= —

(i) Even numbers:-

$\Sigma x = 2, 4, 6, 8, 10, ?$

Ans. 12

(ii) Odd numbers

$\Sigma x = 1, 3, 5, 7, 9, ?$

Ans. 11

(iii) Prime numbers

$\Sigma x = 2, 3, 5, 7, 11, 13, ?$

Ans. 17

(iv) Perfect squares

$\Sigma x = 121, 144, 169, 196, 225, ?$
= 11 12 13 14 15 16

Ans. 256

(v) Perfect Cube

$$\sum \underline{=} 6859, 5832, 4513, 4096, 3375, ?$$

Ans. 2744

(2) Difference series.

$$\sum \underline{=} 13, 18, 28, 43, 63, 83, 98$$

$\underbrace{\quad}_{+5} \quad \underbrace{\quad}_{+10} \quad \underbrace{\quad}_{+15} \quad \underbrace{\quad}_{+20} \quad \underbrace{\quad}_{+25}$

Ans. 88

$$\sum \underline{=} 1348, 1338, 1318, 1288, 1248, 1198$$

$\underbrace{\quad}_{-10} \quad \underbrace{\quad}_{-20} \quad \underbrace{\quad}_{-30} \quad \underbrace{\quad}_{-40} \quad \underbrace{\quad}_{-50}$

Ans. 1198

(3) Geometric series. (Multiplying or Dividing)

$$\sum \underline{=} 5, 35, 245, 1715, ?$$

$\overbrace{\quad}^{*7} \quad \overbrace{\quad}^{*7} \quad \overbrace{\quad}^{*7} \quad \overbrace{\quad}$

Ans. 12005

$$\sum \underline{=} 63923, 3993, 363, 33, ?$$

$\overbrace{\quad}^{\div 11} \quad \overbrace{\quad}^{\div 11} \quad \overbrace{\quad}^{\div 11} \quad \overbrace{\quad}^{\div 11}$

Ques. 3

(1) Two - tier arithmetic series.

$$\text{Ans} \quad 4, 5, 9, 16, 26, 39, 55, ?$$

$\underbrace{\quad \quad \quad}_{+1} \underbrace{\quad \quad \quad}_{+4} \underbrace{\quad \quad \quad}_{+7} \underbrace{\quad \quad \quad}_{+10} \underbrace{\quad \quad \quad}_{+13} \underbrace{\quad \quad \quad}_{+16} \underbrace{\quad \quad \quad}_{+19}$
 $\underbrace{\quad \quad \quad}_{+3} \underbrace{\quad \quad \quad}_{+3}$

(2) Mixed Series.

$$\text{Ans} \quad 7, 15, 32, (), 134, ?$$

$\underbrace{\quad \quad \quad}_{x_2 + 1} \underbrace{\quad \quad \quad}_{x_2 + 2} \underbrace{\quad \quad \quad}_{x_2 + 3} \underbrace{\quad \quad \quad}_{x_2 + 4} \underbrace{\quad \quad \quad}_{x_2 + 5}$

Ans. 281.

$$\text{Ans} \quad 8, 15, 42, 141, 580, ? \quad 2915$$

$\underbrace{\quad \quad \quad}_{+7 \times 1} \underbrace{\quad \quad \quad}_{+6 \times 2} \underbrace{\quad \quad \quad}_{+5 \times 3} \underbrace{\quad \quad \quad}_{+4 \times 4} \underbrace{\quad \quad \quad}_{+3 \times 5}$

$$\text{Ans} \quad 7, 4, 5, 9, 20, ? \quad 52.50$$

$\underbrace{\quad \quad \quad}_{\times 0.5} \underbrace{\quad \quad \quad}_{+0.5} \underbrace{\quad \quad \quad}_{\times 1+1} \underbrace{\quad \quad \quad}_{\times 1.5+1.5} \underbrace{\quad \quad \quad}_{\times 2+2} \underbrace{\quad \quad \quad}_{\times 2.5+2.5}$

⇒ Types of series.

\rightarrow types of series.

1. missing Number Series

2. wrong Number Series

3. Coding Decoding Series.

Ex Wrong Number Series

$$2, 3, 7, 22, \boxed{89}, 2677, 18740 =$$

$\underbrace{\quad}_{x_1+2} \underbrace{\quad}_{x_2+2} \underbrace{\quad}_{x_3+1} \underbrace{\quad}_{x_4+2} \underbrace{\quad}_{x_5+1} \underbrace{\quad}_{x_6+2} \underbrace{\quad}_{x_7+2}$

, 446,

$$\{ \underline{8, 27, 64, 125, 216, 343} \}$$

$$2^3 \quad 3^3 \quad 4^3 \quad 5^3 \quad \overset{216}{6^3} \quad 7^3$$

\rightarrow Coding and Decoding.

$$\{ \underline{6, 16, 57, 241, 1245, 7506} \}$$

(a)

12

1.1

1.96

1.005

0.06

$$4 \quad (a) \quad 12 \quad (b) \quad 45 \quad (c) \quad 1.96 \quad (d) \quad \underline{10.5} \quad (e) \quad 6.66$$

$$\Rightarrow \begin{matrix} 6 & 16 & 57 & 244 & 1265 & 2506 \\ \underbrace{}_{x_2 + (x_1)^2} & \underbrace{}_{x_3 + (x_2)^2} & \underbrace{}_{x_4 + (x_3)^2} & \underbrace{}_{x_5 + (x_4)^2} & \underbrace{}_{x_6 + (x_5)^2} & \end{matrix}$$

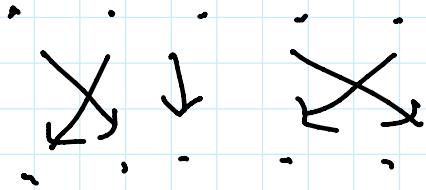
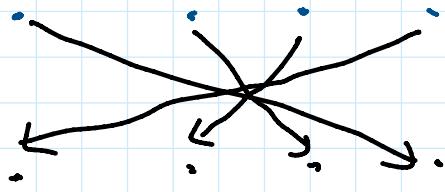
2) Alpha Coding & Decoding.

Q2 In certain code language, STUDENT is written as TYXHJTA, then how is TEACHER written?

26	25	24	23	22	21	20	19	18	17	16	15	14
A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	3	4	5	6	7	8	9	10	11	12	13
amazing boy	COX	DEW	EVG	FUN	GUT	HIS	IKE	JET	KAREN	LION	MAGN	
2	3	4	5	6	7	8	9	10	11	12	13	
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

DHRUV HAKSH
 WSIFE S21HS T U P E N T
 $\frac{+1}{+2} \quad \frac{-1}{-2} \quad \frac{+3}{+3} \quad \frac{+1}{+1} \quad \frac{-1}{-1} \quad \frac{+5}{+5} \quad \frac{-1}{-1} \quad \frac{+7}{+7} \quad \frac{-1}{-1}$
 T V X H J A

T	E	A	C	H	E	R
+1	+2	+3	+4	+5	+6	+7
U	G	D	S	M	K	Y



In a certain language, "PERSON" is written as "g s t s c l" How will "SHOULD" be written?

