

11 August, 2024

G.S.A (Math)

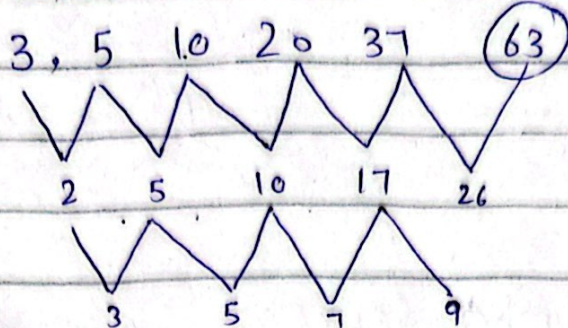
Sunday

Assignment

Find the missing term in given series.

1) 3, 5, 10, 20, 37

$$\begin{array}{r} 26 \\ +37 \\ \hline 63 \end{array}$$



5) 1, 8, 4, 27, 9, ...

$$= 1^2, 2^3, 2^2, 3^3, 3^2, 4^3, 4^2, \dots$$

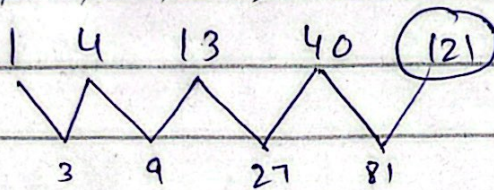
$$= 1, 8, 4, 27, 9, 64, 16, \dots$$

2) $1, \frac{1}{4}, \frac{1}{13}, \frac{1}{40}, \dots$

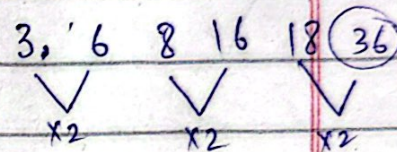
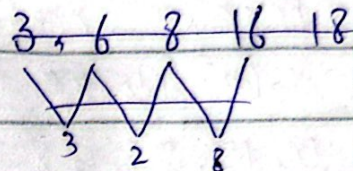
Taking Reciprocal

1, 4, 13, 40, ...

$$\begin{array}{r} 40 \\ +21 \\ \hline 121 \end{array}$$



6) 3, 6, 8, 16, 18, ...



Required Series

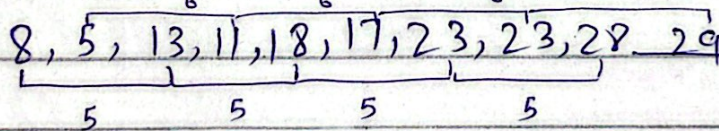
$1, \frac{1}{4}, \frac{1}{13}, \frac{1}{40}, \frac{1}{121}, \dots$

$$\begin{array}{r} 143 \\ +152 \\ \hline 295 \end{array}$$

$$\begin{array}{r} 96 \\ +97 \\ \hline 193 \end{array}$$

3) 8, 5, 13, 11, 18, 17, 23, 23, 28

$$\begin{array}{r} 49 \\ +25 \\ \hline 74 \end{array}$$

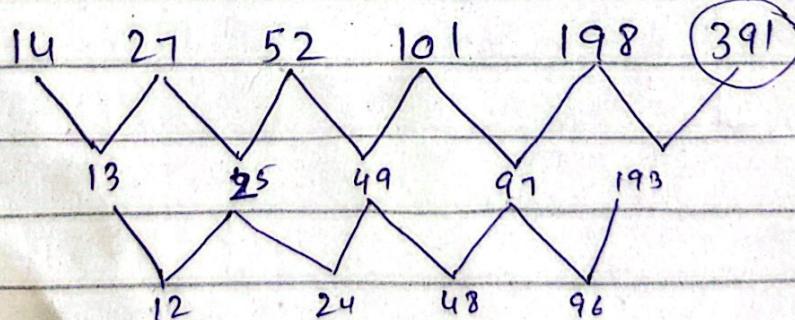


4) 14, 27, 52, 101, 198, ...

$$\begin{array}{r} 452 \\ +27 \\ \hline 479 \end{array}$$

$$\begin{array}{r} 101 \\ +52 \\ \hline 153 \end{array}$$

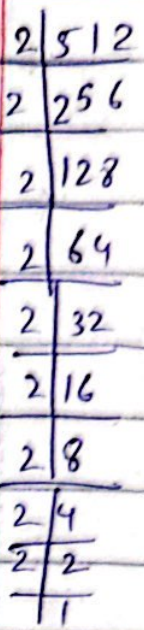
$$\begin{array}{r} 198 \\ +101 \\ \hline 299 \end{array}$$



7) 2, 8, 512, ...

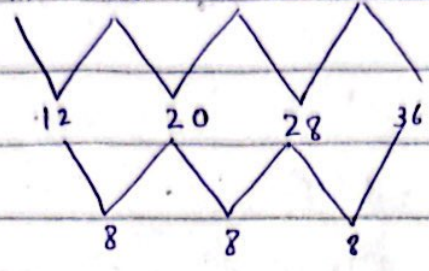
$2^1, 2^3, 2^9, 2^{27}, \dots$

= 2, 8, 512, 131217728, ...



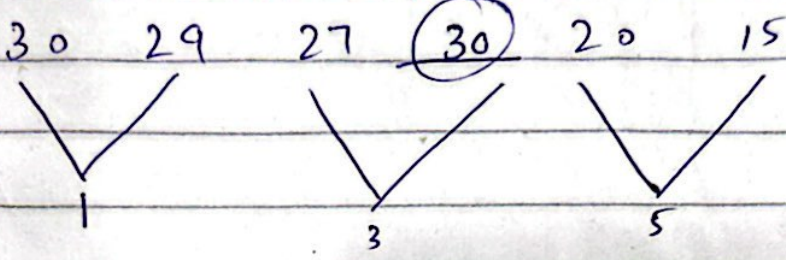
8) 4, 16, 36, 64, ...

4, 16, 36, 64, (100)



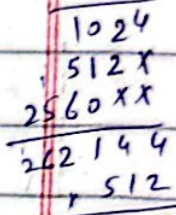
14
4
36
100

9) 30, 29, 27, —, 20, 15

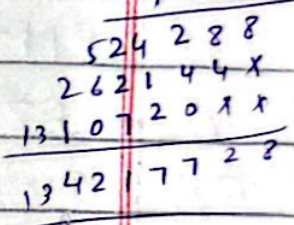
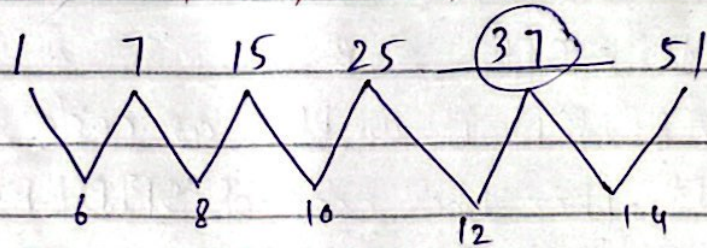


9x9x9

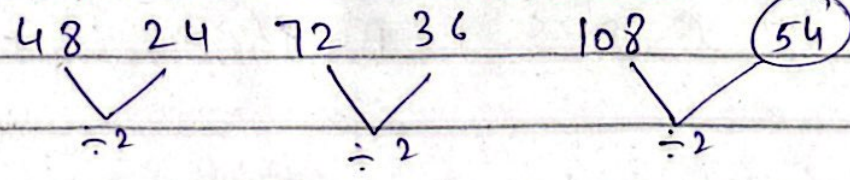
512
√512



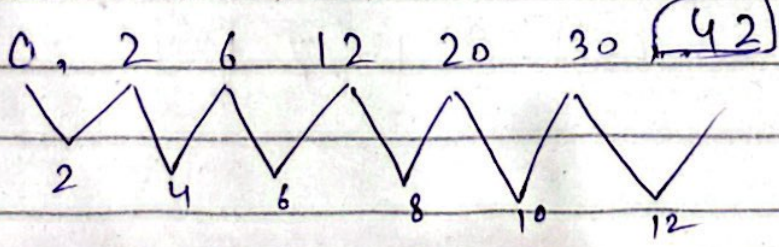
10) 1, 7, 15, 25, —, 51



1) 48, 24, 72, 36, 108, —



0, 2, 6, 12, 20, 30, ...



1 August, 2024

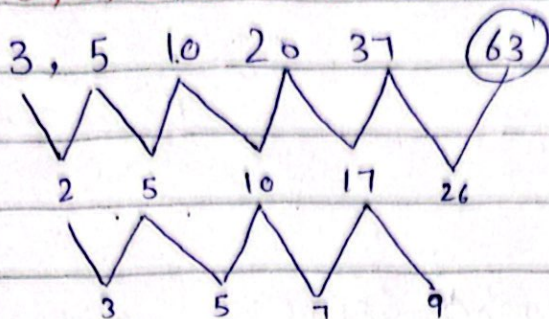
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5) 1, 8, 4, 27, 9, ...

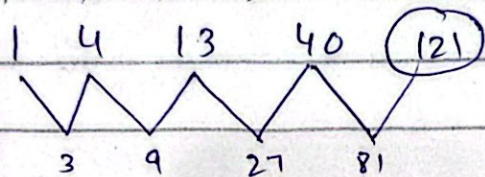
$$= 1^2, 2^3, 2^2, 3^3, 3^2, 4^3, 4^2, \dots$$

$$= 1, 8, 4, 27, 9, 64, 16, \dots$$

2) $1, \frac{1}{4}, \frac{1}{13}, \frac{1}{40}, \dots$

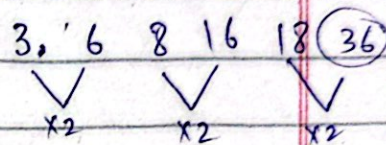
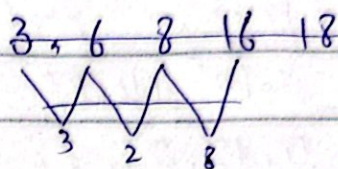
Taking Reciprocal

1, 4, 13, 40, ...



$$\begin{array}{r} 40 \\ + 81 \\ \hline 121 \end{array}$$

6) 3, 6, 8, 16, 18, ...

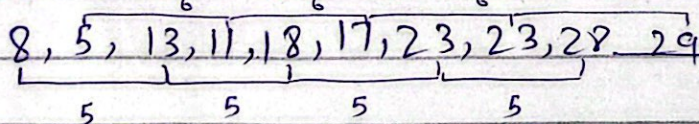


Required Series

$1, \frac{1}{4}, \frac{1}{13}, \frac{1}{40}, \frac{1}{121}, \dots$

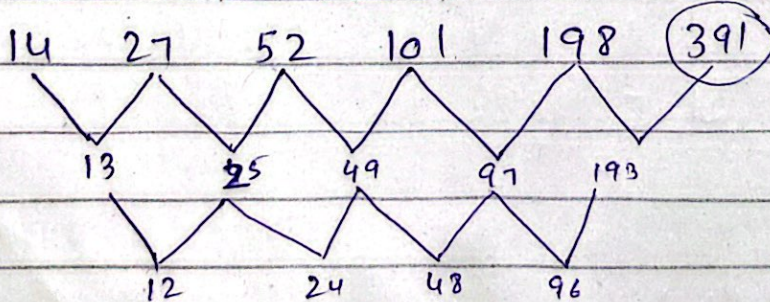
$$\begin{array}{r} 43 \\ + 152 \\ \hline 195 \end{array}$$

3) 8, 5, 13, 11, 18, 17, 23, 23, 28



$$\begin{array}{r} 57 \\ + 41 \\ \hline 98 \end{array}$$

4) 14, 27, 52, 101, 198, ...



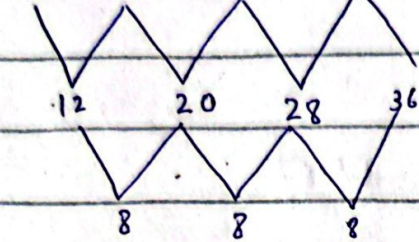
$$\begin{array}{r} 42 \\ + 2 \\ \hline 44 \end{array}$$

$$\begin{array}{r} 198 \\ + 101 \\ \hline 299 \end{array}$$

7) 2, 8, 512, ...
 $2^1, 2^3, 2^9, 2^{27}, \dots$
 $= 2, 8, 512, 134217728, \dots$

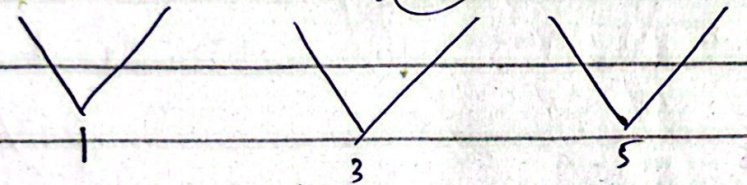
2	512
2	256
2	128
2	64
2	32
2	16
2	8
2	4
2	2
	1

8) 4, 16, 36, 64, ... (100)



$\frac{14}{23}$
 $\frac{14}{100}$

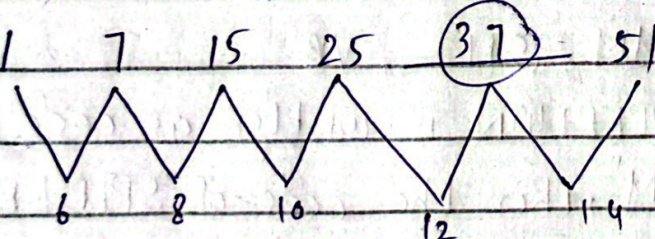
9) 30, 29, 27, ..., 20, 15



9x9x9

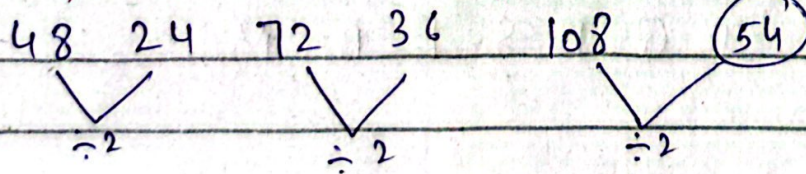
512
x 512
1024
512x
2560xx
202144
512

10) 1, 7, 15, 25, ..., 51

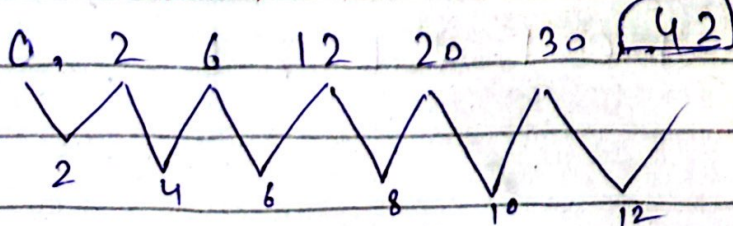


524	288
2621	44x
13107	20xx
1342	7728

11) 48, 24, 72, 36, 108, ...



12) 0, 2, 6, 12, 20, 30, ...

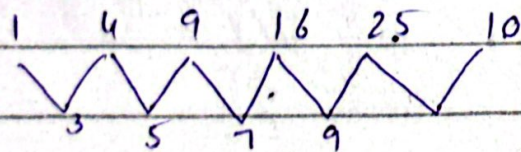


Coding / Decoding

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

Questions

- 1) AB, DE, GH, JK, MN
- 2) PDZ, QCY, RBX, SAW
- 3) O, T, T, F, F, S, S, E, N, T
- 4) A¹, D⁴, I⁹, P¹⁶, V²⁵, J¹⁰



- 5) PMT, OOS, NQR, MSQ, LUP
 - 6) AZ, GT, MN, SH, VB
- Q2) The word SUPERMAN is written as code "TTQDSLBM", then the code of SPIDERMAN?

S	U	P	E	R	M	A	N
T	T	Q	D	S	L	B	M

S	P	I	D	E	R	M	A	N
T	O	J	C	F	Q	N	Z	M

Q3 PAKISTAN: SCLIRRXJ
PESHAWAR: ??

P A K I S T A N
S C L I R R X J
3 2 1 0 -1 -2 -3 -4

P E S H A W A R
S G T H Z U X N

Q4 CERTAIN: BFQUZJM
MUNDANE: ??

C E R T A I N
B F Q U Z J M
-1 +1 -1 +1 -1 +1 -1

M U N D A N E
L V M E Z M F

Q5 COMPUTER: RFUVQNPC
MEDICINE = ?

C¹⁵ O¹³ M¹⁶ P²¹ U²⁰ T⁵ E²
R⁶ E²¹ U²² V¹⁷ Q¹⁴ N¹⁶ P¹¹ C³

M E D I C I N E
E O J D J E F M

