

SERIES

Number Series 1 8 9 64 25

Alphabet Series AB, EF, IJ ...,

Small letter Series abc_ab_a_bca_bc

NUMBER SERIES:- Series are of two types

1) Simple series:- If a question has only one series, then it is called "simple series"

साधारण श्रृंखला यदि किसी प्रश्न में केवल एक ही श्रृंखला हो तो उसे "साधारण श्रृंखला" कहते हैं।

6, 12, 18, 24, 30, ...

2) Compound series: If a question has two or more than two series, then it is called "compound series".

मिश्रित श्रृंखला :- यदि किसी प्रश्न में दो या दो से अधिक श्रृंखलाएँ हों तो उसे "मिश्रित श्रृंखला" कहते हैं।

Ex. 6, 10, 4, 12, 20, 8, 18, 30, 12, 24, 40, 16

TYPE 1:- If a series is increasing slowly, then addition can be done to previous number.

यदि एक श्रृंखला धीरे-धीरे बढ़ रही है, तो पछिली संख्या में जोड़ किया जा सकता है

1) 7, 13, 21, 31, 43, 57 ?

73

7 13 21 31 43 57 73
+6 +8 +10 +12 +14

2) 5, 13, 17, 25, 29 ? , 41

37

5 13 17 25 29 37 41
+8 +4 +8 +4 +8 +4

3) 115, 130, 150, 175, 205 ?

240

115 130 150 175 205 240
+15 +20 +25 +30 +35

4) 83, 103, 125, 149, 175, ?

175
27
202

83 103 125 149 175 202
+20 +22 +24 +26 +28

$$\begin{array}{ccccccccc}
 110 & 115 & 125 & 145 & 185 & ? \\
 \underbrace{}_{+5} & \underbrace{}_{+10} & \underbrace{}_{+20} & \underbrace{}_{+40} & \underbrace{}_{+80} & \\
 & \underbrace{}_{\times 2} & \underbrace{}_{\times 2} & \underbrace{}_{\times 2} & \underbrace{}_{\times 2} &
 \end{array}$$

5) 110, 115, 125, 145, 185 ?

$$265$$

$$185 + 80 = 265$$

TYPE 2: If a series is increasing very fast. So what can be multiplied and added to the previous number. /

यदि कोई श्रृंखला बहुत तेजी से बढ़ रही है। तो क्या गुणा किया जा सकता है और पछिली संख्या में जोड़ जा सकता है।

6). 12, 12, 24, 72, 288, ?

$$1440$$

$$\begin{array}{ccccccccc}
 12 & 12 & 24 & 72 & 288 & ? \\
 \underbrace{}_{\times 1} & \underbrace{}_{\times 2} & \underbrace{}_{\times 3} & \underbrace{}_{\times 4} & \underbrace{}_{\times 5} &
 \end{array}$$

7) 4, 9, 17, 35, 69, 139, ?

$$277$$

$$\begin{array}{ccccccccc}
 4 & 9 & 17 & 35 & 69 & 139 & ? \\
 \times 2 - 1 & \times 2 - 1 & \times 2 - 1 & \times 2 - 1 & \times 2 - 1 & \times 2 - 1 & \\
 & & & & & & 278 - 1
 \end{array}$$

8) 15, 15, 31, 95, 383, ?

$$1919$$

$$\begin{array}{ccccccccc}
 15 & 15 & 31 & 95 & 383 & ? \\
 \times 1 + 0 & \times 2 + 1 & \times 3 + 2 & \times 4 + 3 & \times 5 + 4 & \\
 & & & & & 1915 + 4
 \end{array}$$

8) 5, 11, 20, 43, 82, ?

$$169$$

$$\begin{array}{ccccccccc}
 5 & 11 & 20 & 43 & 82 & ? \\
 \times 2 + 1 & \times 2 - 2 & \times 2 + 3 & \times 2 & \times 2 + 5 & \\
 & & & & & 164 + 5
 \end{array}$$

9) 4, 5, 8, 28, 104, ?

536

$$\begin{array}{ccccccc}
 4 & 5 & 8 & 28 & 104 & & \\
 \times 1 + 1 & \times 2 - 2 & \times 3 + 4 & \times 4 - 8 & \times 5 + 16 & & \\
 & & & & 520 + 16 & & \\
 & & & & 536 & &
 \end{array}$$

10) 2, 3, 8, 27, 112, ?

565

$$\begin{array}{ccccccc}
 2 & 3 & 8 & 27 & 112 & & \\
 \times 1 + 1 & \times 2 + 2 & \times 3 + 3 & \times 4 + 4 & \times 5 + 5 & & \\
 & & & & 565 & &
 \end{array}$$

11) 5, 6, 10, 33, 128, ?

645

$$\begin{array}{ccccccc}
 5 & 6 & 10 & 33 & 128 & & ? \\
 \times 1 + 1 & \times 2 - 2 & \times 3 + 3 & \times 4 - 4 & \times 5 + 5 & & \\
 & & & & 640 + 5 & & \\
 & & & & 645 & &
 \end{array}$$

12) 27, 50, 192, 1140, 9104, ?

91020

$$\begin{array}{ccccccc}
 27 & 50 & 192 & 1140 & 9104 & & \\
 \times 2 - 4 & \times 4 - 8 & \times 6 - 12 & \times 8 - 16 & \times 10 - 20 & & \\
 & & & & 91040 - 20 & & \\
 & & & & 91020 & &
 \end{array}$$

13) 3, 5, 7, 8, 15, ?, 31, 26

(a) 24

(b) 14

(c) 21

(d) 18

$$\begin{array}{ccccccc}
 3 & 5 & 7 & 8 & 15 & ? & 31 \\
 \times 2 - 1 & \times 2 - 6 & & & & & \\
 & & \times 2 - 3 & \times 2 - 1 & + 6 & + 12 & \\
 & & & & & (14) & \\
 3 & 5 & 7 & 8 & 15 & ? & 31 \\
 + 4 & + 8 & + 16 & & & &
 \end{array}$$

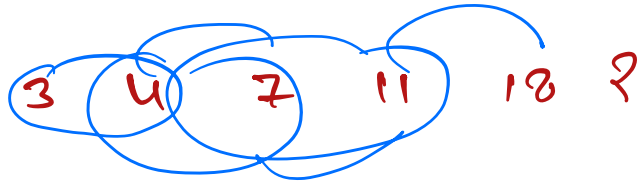
15) 3, 4, 7, 11, 18, ?

(a) 22

(b) 25

(c) 29

(d) 31



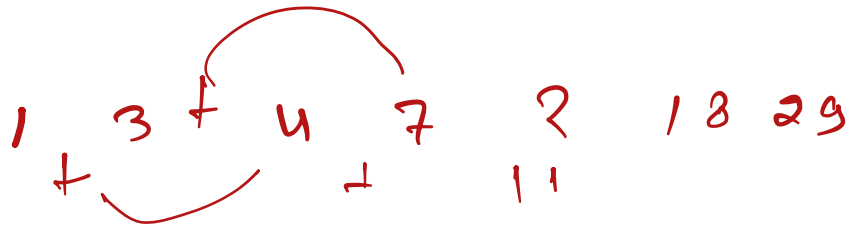
16) 1, 3, 4, 7, ?, 18, 29

(a) 10

(b) 13

(c) 15

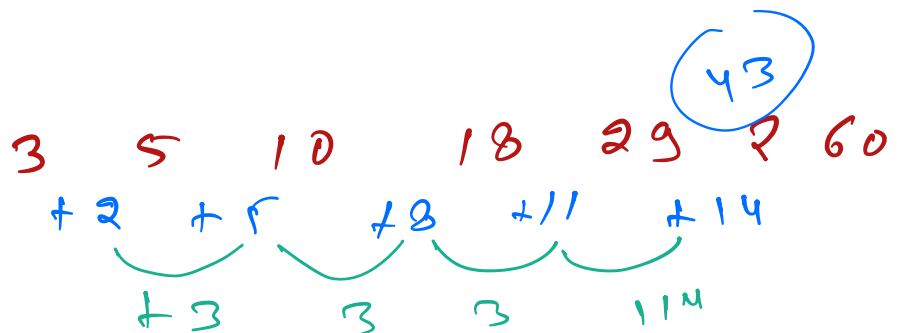
(d) 11



17) 3, 5, 10, 18, 29, ?, 60

(a) 46

(b) 37



(c) 45

(d) 43

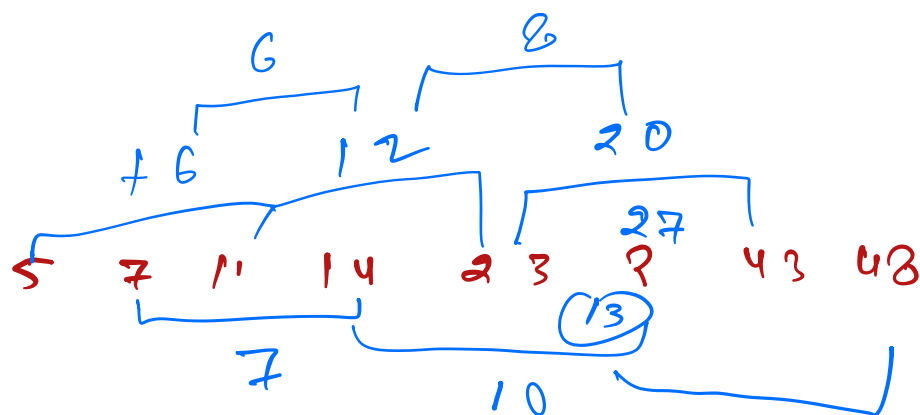
18) 5 7 11 14 23 ? 43 48

(a) 27

(b) 39

(c) 31

(d) 26



19) Which number is wrong in the given series? दी गई श्रृंखला में कौन सी संख्या गलत है?

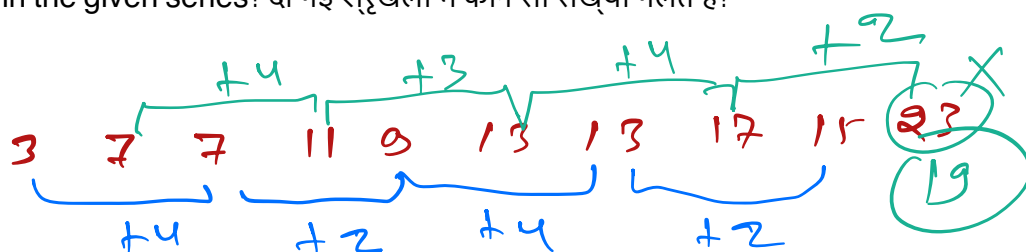
3, 7, 7, 11, 9, 13, 13, 17, 15, 23

(a) 9

(b) 23

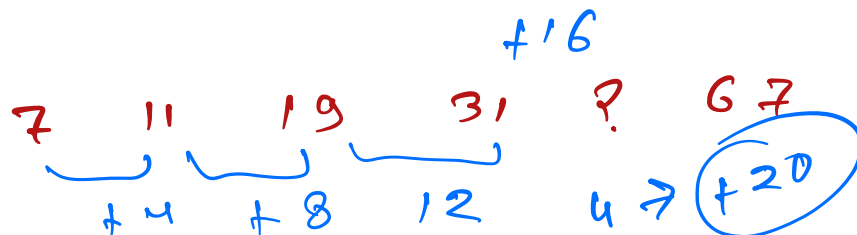
(c) 13

(d) 17



20) 7, 11, 19, 31, ?, 67

(a) 45



(b) 51

(c) 43

(d) 47

21) 3, 7, 16, 35, ?, 153

(a) 84

(b) 74

(c) 78

(d) 63

TYPE:- 3

Multiplication By Fraction / भन्तिन से गुणा

22) 16, 8.5, 9.5, 21, 88, ?

712

$3 \times 2 + 1 = 7$
 $7 \times 2 + 2 = 16$
 $16 \times 2 + 3 = 35$
 $35 \times 2 + 4 = 74$
 $74 \times 2 + 5 = 153$

23) 8, 9, 15, 32, 82.5, ?

250.5

$16 \times 0.5 + 0.5 = 8.5$
 $8.5 \times 1 + 1 = 9.5$
 $9.5 \times 2 + 2 = 21$
 $21 \times 4 + 4 = 88$
 $88 \times 8 + 8 = 712$

$8 \times 1 + 1 = 9$
 $9 \times 1.5 + 1.5 = 15$
 $15 \times 2 + 2 = 32$
 $32 \times 2.5 + 2.5 = 82.5$
 $82.5 \times 3 + 3 = 250.5$

$64 \times 2.5 = 160$

24) 4, 4, 6, 12, 30, 90, ?

315

$4 \times 1 = 4$
 $4 \times 1.5 = 6$
 $6 \times 2 = 12$
 $12 \times 2.5 = 30$
 $30 \times 3 = 90$
 $90 \times 3.5 = 315$

25) 5, 3, 4, 7.5, 17, ?

45

$$\begin{array}{ccccccc}
 5 & 3 & 4 & 7.5 & 17 & ? \\
 \times 0.5 + 0.5 & \times 1 + 1 & \times 1.5 + 1.5 & \times 2 + 2 & \times 2.5 + 2.5 & \\
 \hline
 & & & & 42.5 & 45
 \end{array}$$

26) 2, 2, 3, 6, 15, 45, 157.5, ?

620

$$\begin{array}{ccccccc}
 2 & 2 & 3 & 6 & 15 & 45 & 157.5 & ? \\
 \times 1 & \times 1.5 & \times 2 & \times 2.5 & \times 3 & \times 3.5 & \times 4 & \\
 \hline
 & & & & & & 620 &
 \end{array}$$

27) 9, 5, 6, 10.5, 23, 60, ?

183

$$\begin{array}{ccccccc}
 9 & 5 & 6 & 10.5 & 23 & 60 & ? \\
 \times 0.5 + 0.5 & \times 1 + 1 & \times 1.5 + 1.5 & \times 2 + 2 & \times 2.5 + 2.5 & \times 3 + 3 & \\
 \hline
 & & & & & & 183
 \end{array}$$

28) 12, 7, 8, 13, 27, ?

68.5

$$\begin{array}{ccccccc}
 12 & 7 & 8 & 13 & 27 & ? \\
 \times 0.5 + 1 & \times 1 + 1 & \times 1.25 + 1.25 & \times 2 + 2 & \times 2.5 + 2.5 & \\
 \hline
 & & & & & 68.5
 \end{array}$$

TYPE:- 4

Series by squares of numbers / संख्याओं के वर्गों द्वारा श्रृंखला का निर्माण

29) 17, 23, 39, 45, 69, ?

75

$$\begin{array}{ccccccc}
 17 & 23 & 39 & 45 & 69 & ? \\
 \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \\
 4^2 + 1 & 5^2 - 2 & 6^2 + 3 & 7^2 - 4 & 8^2 + 5 &
 \end{array}$$

$$9^2 = 81 - 6 = 75$$

30) 17, 27, 39, 53, 69, ?

$$\begin{array}{cccccc}
 & & 5^2+2 & & 7^2+4 & \\
 & & \uparrow & & \uparrow & \\
 17 & 27 & 39 & 53 & 69 & ? \\
 \downarrow & & \downarrow & & \downarrow & \\
 4^2+1 & & 6^2+3 & & 8^2+5 &
 \end{array}$$

$$9^2 + 6 = 81 + 6 = 87$$

87

31) 83, 103, 125, 149, ?

$$\begin{array}{cccccc}
 & & 10^2+3 & & 12^2+5 & \\
 & & \uparrow & & \uparrow & \\
 83 & 103 & 125 & 149 & ? & \\
 \downarrow & & \downarrow & & \downarrow & \\
 9^2+2 & & 11^2+4 & & 13^2+6 & \\
 & & & & 169+6 & \\
 & & & & 175 &
 \end{array}$$

175

32) 15, 16, 28, 93, 356, ?

$$\begin{array}{cccccc}
 & & \times 2 - 2^2 & & \times 4 - 16 & \\
 15 & 16 & 28 & 93 & 356 & ? \\
 \times 1 + 2 & & \times 3 + 3^2 & & \times 5 + 5^2 & \\
 & & 84 + 9 & & 1780 + 25 & \\
 & & 84 + 9 & & 1805 &
 \end{array}$$

1805

33) 5, 6, 16, 57, 244, ?

$$\begin{array}{cccccc}
 \times 1 + 1^2 & & \times 3 + 3^2 & & \times 5 + 5^2 & \\
 5 & 6 & 16 & 57 & 244 & ? \\
 \times 2 + 2 & & \times 4 + 4^2 & & & \\
 & & & & 1220 + 25 & \\
 & & & & 1245 &
 \end{array}$$

1245

34) 2, 4, 10, 22, 42, 72, ?

$$\begin{array}{cccccc}
 2 & 4 & 10 & 22 & 42 & 72 & ? & 114 \\
 +2 & +6 & +12 & +20 & +30 & +42 & & \\
 \hline
 & 4 & 6 & 8 & 10 & 12 & &
 \end{array}$$

114

TYPE:-5

Series by cube of a numbers / एक संख्या के घन द्वारा श्रृंखला द्वारा निर्माण

35) 0, 24, 120, 336, ?

0 24 120 336 ?
 $1^3 - 1$ $3^3 - 3$ $5^3 - 5$ $7^3 - 7$
 $9^3 - 9$ $7^3 - 7 = 343 - 7 = 336$ $9^3 - 9 = 729 - 9 = 720$

36) 30, 68, 130, 222, ?

30 68 130 222 ?
 $3^3 + 3$ $4^3 + 4$ $5^3 + 5$ $6^3 + 6$ $7^3 + 7$
 $4^3 - 10$ $6^3 - 20$ $7^3 + 7 = 343 + 7 = 350$

37) 32, 54, 140, 196, ?

32 54 140 196 ?
 $3^3 + 5$ $5^3 + 15$ $7^3 + 27$ $9^3 + 27 = 729 + 27 = 756$

38) 60, 120, 210, 336, ?

60 120 210 336 ?
 $4^3 - 4$ $5^3 - 5$ $6^3 - 6$ $7^3 - 7$ $8^3 - 8 = 512 - 8 = 504$

$$\begin{array}{ccccccc}
 & & 2^3+4 & & 4^3+8 & & 11^3 & 6^3+12 \\
 & & \downarrow & & & & \downarrow & \\
 -1 & 1 & 2 & 2 & 1 & 7 & 2 & 11 & 5 & 6^3+12 \\
 & & & & \downarrow & & & & \downarrow & \\
 1^3-2 & & & & 3^3-6 & & & & 5^3-10 &
 \end{array}$$

39). -1, 12, 21, 72, 115, ?

$$216 + 12 \quad (228)$$

40) 2, 10, 37, 101, 226, ?

$$(542)$$

$$\begin{array}{ccccccc}
 & & 27 & & 125 & & \\
 & & \downarrow & & \downarrow & & \\
 2 & 10 & 37 & 101 & 226 & ? & \\
 \underbrace{}_{+8} & & \underbrace{}_{64} & & \underbrace{}_{216} & &
 \end{array}$$

41) 5, 6, 10, 37, 53, 178, ?

$$\begin{array}{r}
 128 \\
 +36 \\
 \hline
 214
 \end{array}$$

$$\begin{array}{ccccccc}
 & & 4 & & 16 & & \\
 & & \downarrow & & \downarrow & & \\
 5 & 6 & 10 & 37 & 53 & 178 & ? \\
 \underbrace{}_1 & & \underbrace{}_{37} & & \underbrace{}_{53} & &
 \end{array}$$

42) 2, 6, 33, 49, 174, 210, ?

$$(557)$$

$$\begin{array}{ccccccc}
 & & 27 & & 125 & & 7^3 \\
 & & \downarrow & & \downarrow & & \downarrow \\
 2 & 6 & 33 & 49 & 174 & 210 & ? \\
 \underbrace{}_4 & & \underbrace{}_{16} & & \underbrace{}_{36} & &
 \end{array}$$

$$\begin{array}{r}
 210 \\
 347 \\
 \hline
 557
 \end{array}$$

43) 4, 10, 27, 140, ?

A) 379

$$\begin{array}{ccccccc}
 4 & 10 & 27 & 140 & ? & & \\
 \times 2 + 2 & \times 3 - 3 & \times 5 + 5 & \times 7 + 7 & & & \\
 & & 135 + 5 & 980 - 7 & & & \\
 & & & 977 & & &
 \end{array}$$

r

B) 973

(c) 937

(d) 397

44) 13, 42, 129, 390, ?

(a) 1220

B) 1173

(c) 1179

(d) 1170

$$\begin{array}{ccccccc} & & 12^6 + 3 & & & & \\ & \times 3 & & \times 3 + 7 & & \times 3 + 3 & \\ 13 & 42 & 129 & 390 & & & \\ & \times 3 + 3 & & & 1170 + 3 & & \end{array}$$

TYPE:- 6

Series by mixture of squares and cube/

वर्गों और घनों के मिश्रण द्वारा श्रृंखला का निर्माण

45) 0, 2, 3, 9, 8, 28, ?

15

$$\begin{array}{ccccccc} & 0 & 2 & 3 & 9 & 8 & 28 & ? & 15 \\ & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ & 1^2 - 1 & 2^2 - 1 & 2^3 + 1 & 3^2 - 1 & 2^3 + 1 & 3^2 - 1 & 4^2 - 1 & 2^3 + 1 \end{array}$$

46) 2, 0, 5, 7, 10, 26, ?

17

$$\begin{array}{ccccccc} & 2 & 0 & 5 & 7 & 10 & 26 & ? & 17 \\ & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ & 1^2 + 1 & 2^2 + 1 & 2^3 + 1 & 3^2 - 1 & 2^3 + 1 & 3^2 - 1 & 4^2 - 1 & 2^3 + 1 \end{array}$$

48) 1, -1, 2, 0, 5, 7, ?

$$\begin{array}{ccccccc} & 1 & -1 & 2 & 0 & 5 & 7 & ? & 10 \\ & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ & 0^2 + 1 & 1^2 + 1 & 2^2 + 1 & 3^2 - 1 & 2^2 + 1 & 3^2 - 1 & 4^2 - 1 & 2^2 + 1 \end{array}$$

49) 1, -1, 4, -2, 9, 3, ?, ?

$$16, 22$$

$$\begin{array}{ccccccc}
 1 & -1 & 4 & -2 & 9 & 3 & ? \\
 \downarrow & \downarrow & \uparrow + 3 & \uparrow - 3 & \uparrow + 5 & \uparrow - 5 & \\
 0^3 + 1 & 0^3 - 1 & 1^3 + 3 & 2^3 - 3 & 3^3 + 5 & 4^3 - 5 &
 \end{array}$$

$$\begin{array}{cc}
 3^2 + 7 & 5^2 - 7 \\
 16 & 20
 \end{array}$$