

# Number System - I

Complete Crash Course on General Aptitude 2022/23

Saurabh Thakur • Lesson 1 • Dec 20, 2021

**20  
HOURS  
ONLY**



# **GATE APTITUDE CRASH COURSE 2022**

**USE CODE ST26**

**20 DEC  
04:00 PM**

**BY SAURABH SIR**



$$108 - \left\langle \begin{array}{l} 5 \times 1 = 5 \\ 5 \times 2 = 10 \end{array} \right\rangle \rightarrow \underline{\textcircled{14}} / \textcircled{15}$$



01

## Numbers.

① Prime No. - 2, 3, 5, 7 ... 

Composite No. - 4, 6, 8, 10 ...

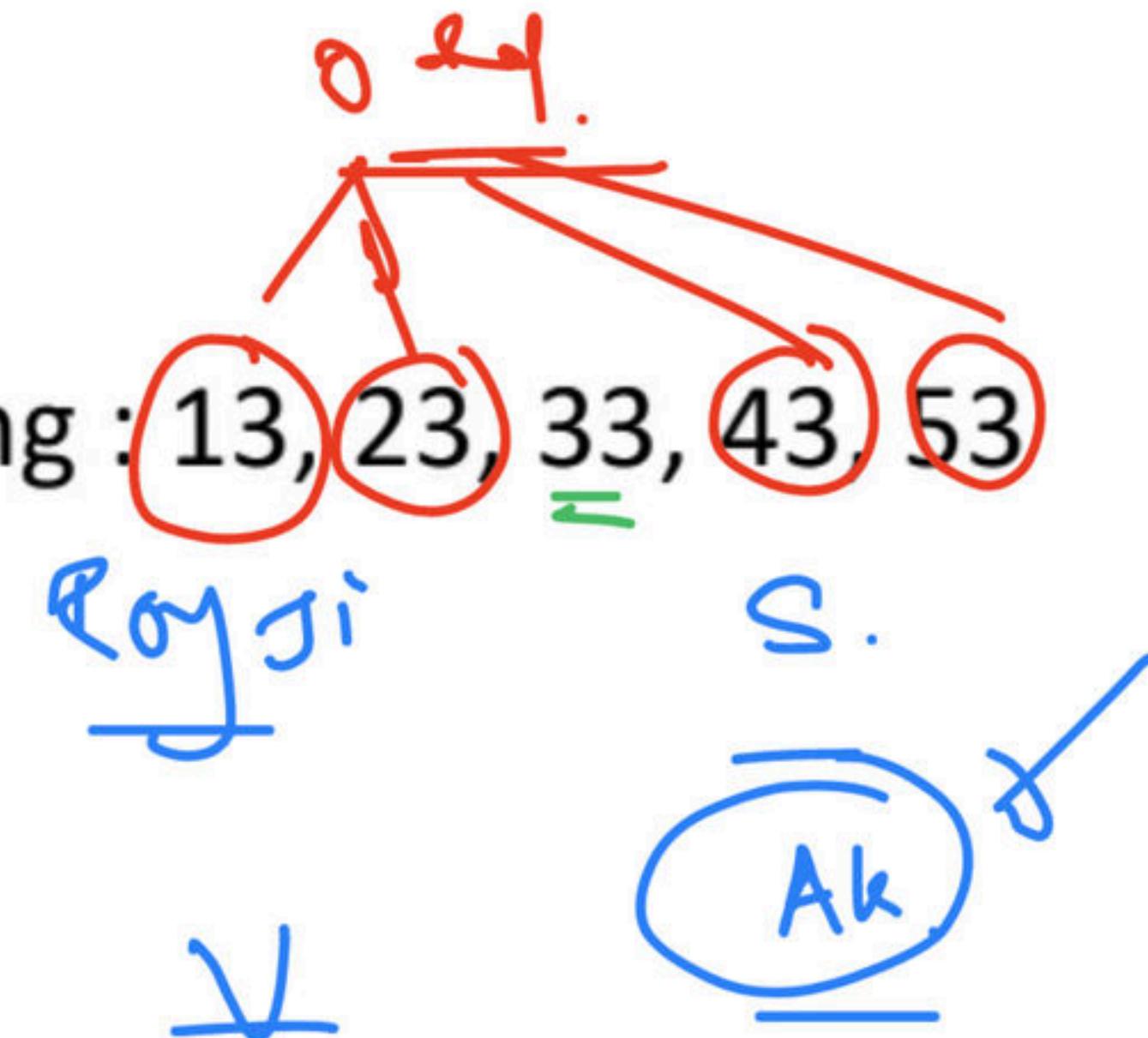
② Integers. 0, ±1, ±2, ±3 ...

④ Even  $\Rightarrow$  0, ±2, ±4 ...

Odd  $\Rightarrow$  ±1, ±3, ±5 ...

Pick the **odd one** out in the following : 13, 23, 33, 43, 53

- (A) 23
- (B) 33
- (C) 43
- (D) 53



[GATE 2016 : IISc Bangalore (EE Set - 2)]



No. — A.  
2 - B.  
3 - C.  
5 - E.

02

Find the **next term** in the sequence: 7G, 11K, 13M, \_\_\_\_\_.

(A) 15Q

(C) 15P

(B) 17Q  
(D) 17P

~~a~~

8

~~E~~

17Q

$$m = 13.$$

$$S = 19$$

[GATE 2014 : IIT Kharagpur  
(EC Set - 3, ME Set - 3)]





03

Find the next term in the sequence: 13M, 17Q, 19S,  
\_\_\_\_\_.

- (A) ~~21~~W      (B) ~~21~~V  
**(C) 23W**      (D) 23V

[GATE 2014 : IIT Kharagpur  
(EC Set - 4, ME Set - 4)]

②

## Perfect Squares | Perfect Cubes

③

④

0 ✓  
1 ✓  
4 ✓

9 ✓  
6 ✓  
5

④

④

$$UDV = 0|1|4|5|6|9.$$

5|7  
14

49|13|5

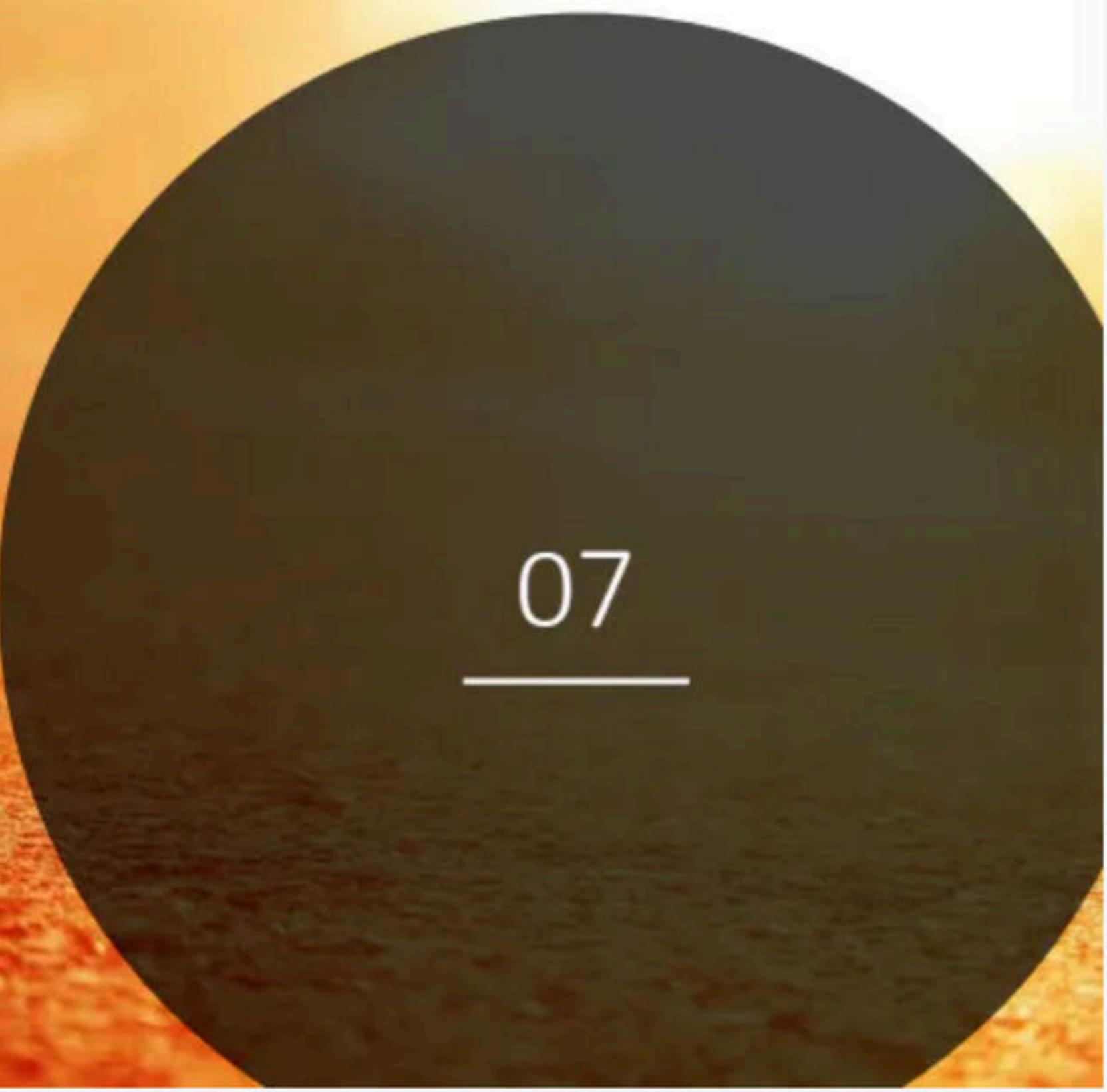
64 ⇒ 7

81 14

16 ⇒ 7  
25 →  
9  
4  
36

1|9|6|1|3|5|1|4|7|9

D.S.  
1|9|7|9



Cat's Tim.

$18^2$

[324, 441, 97] and 64) is \_\_\_\_\_.

$9^2$

$8^2$

- (A) 324
- (B) 441
- (C) 97
- (D) 64

[GATE 2016 : IISc Bangalore (IN)]

05

Aditi.

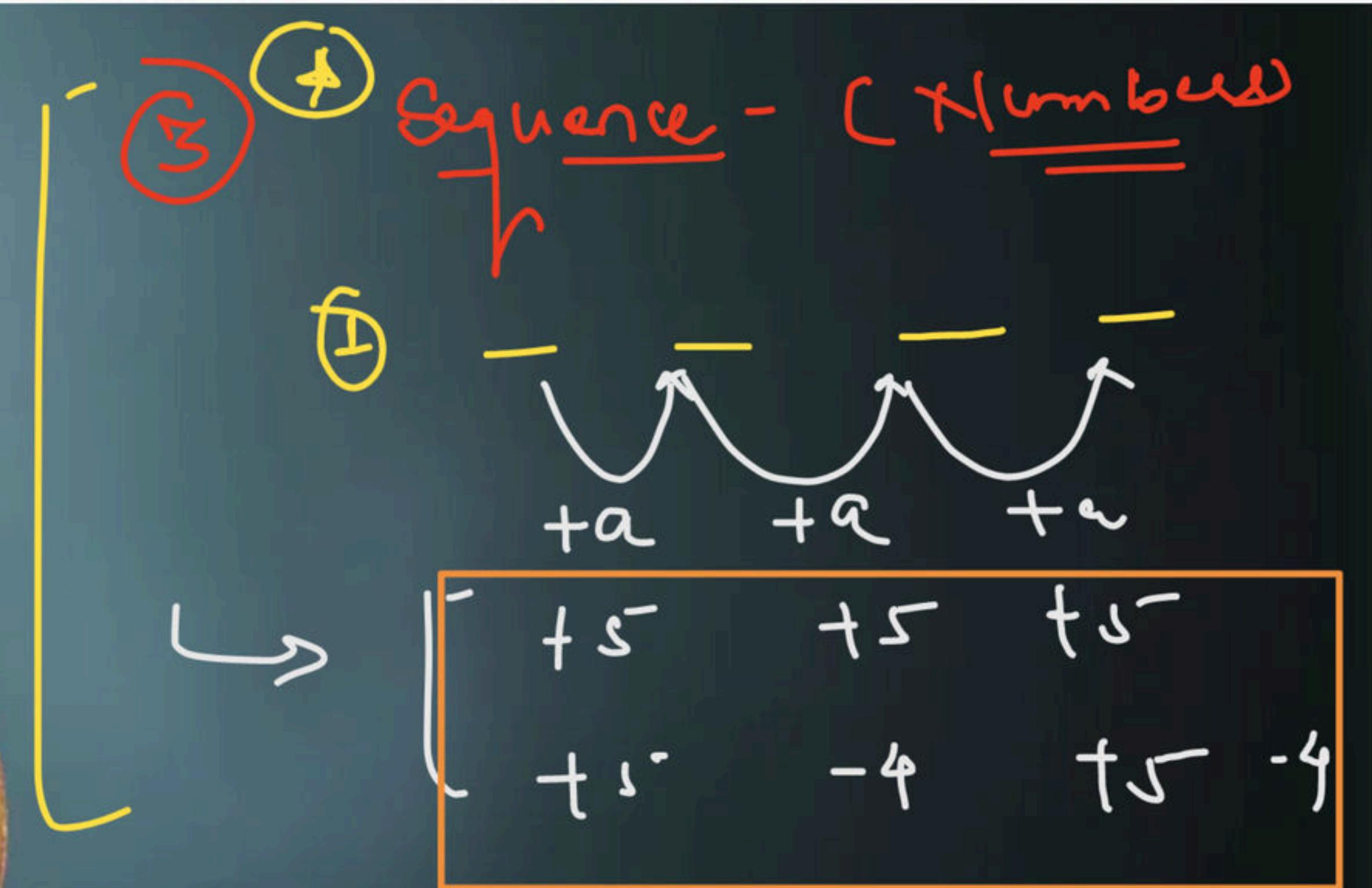
$(\text{Prime No.})^3$ .

$7^3$ ,  $11^3$

The missing number in the given sequence 343, 1331,  
1331, 4913 is

- (A) 4096  
(B) 2744  
(C) 2197  
(D) 3375

[GATE 2019 : IIT Madras (EE)]





Which number does not belong in the series below :

2, 5, 10, 17, 26, 37, 50, 64



# [GATE 2014 : IIT Kharagpur (EE Set - 3, CSE Set - 3)]

A silhouette of a person standing with their arms raised, set against a vibrant sunset or sunrise sky. The sky is filled with warm, golden-yellow hues near the horizon, transitioning into a cooler blue and purple at the top. The person is positioned centrally, with their arms raised in a gesture of triumph or freedom. The overall mood is one of accomplishment and connection with nature.

07



Fill in the missing number in the series :

2   3   6   15   \_\_\_\_\_   157.5   630.

[GATE 2014 : IIT Kharagpur  
(EC Set - 2, ME Set - 2)]

08



$$\underline{35 \times 2 + 11}$$

$$\underline{\times 2} + 11$$

What is the next number in the series :

$$12 \quad 35 \quad 81 \quad 173$$

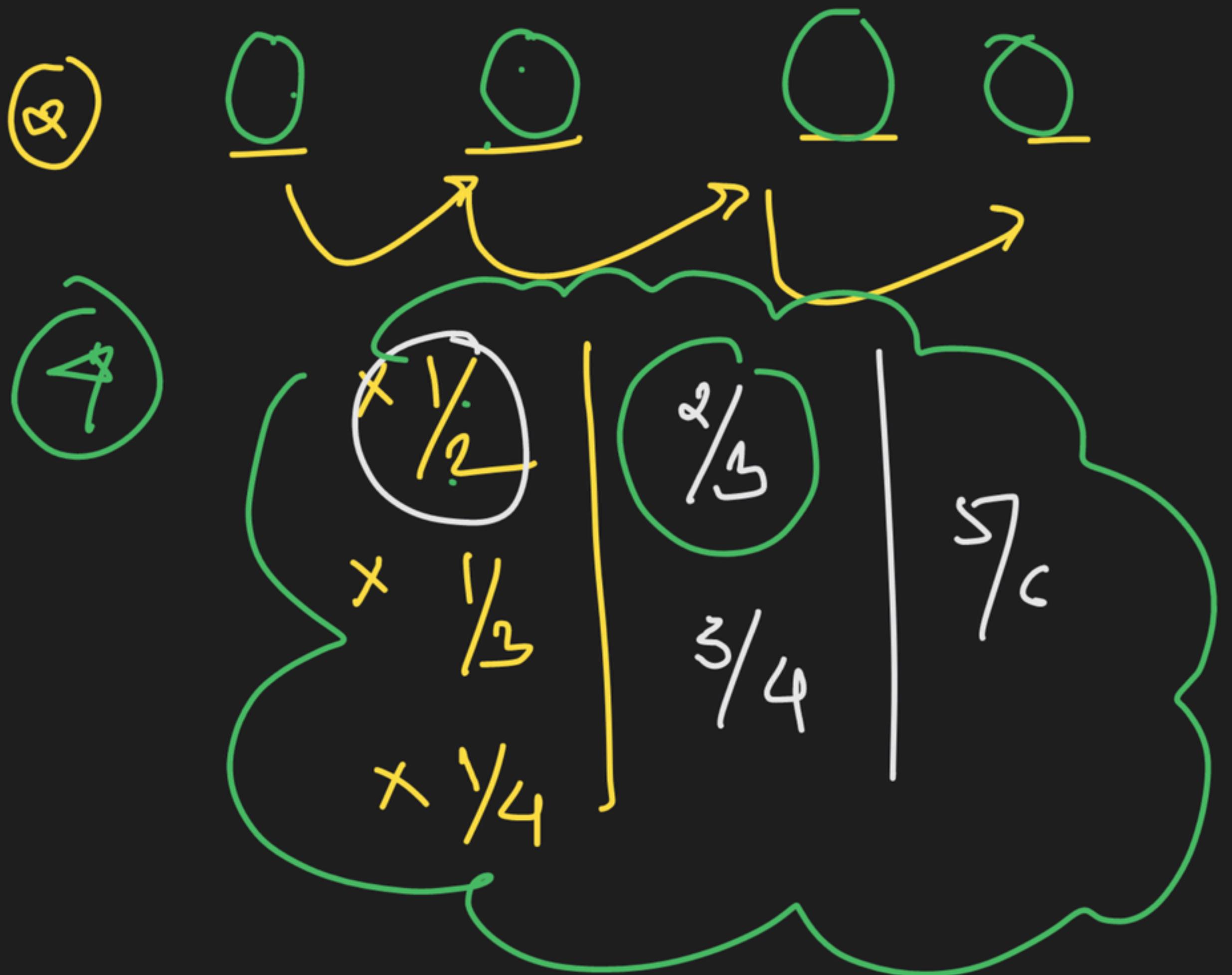
$$\underline{\quad} \rightarrow \underline{\quad} \rightarrow \underline{\quad}$$

$$357$$

$$\boxed{\underline{357 \times 2 + 11}}$$

$$\underline{12 \times 2 + 11}$$

[GATE 2014 : IIT Kharagpur  
(EC Set - 1, ME Set - 1)]

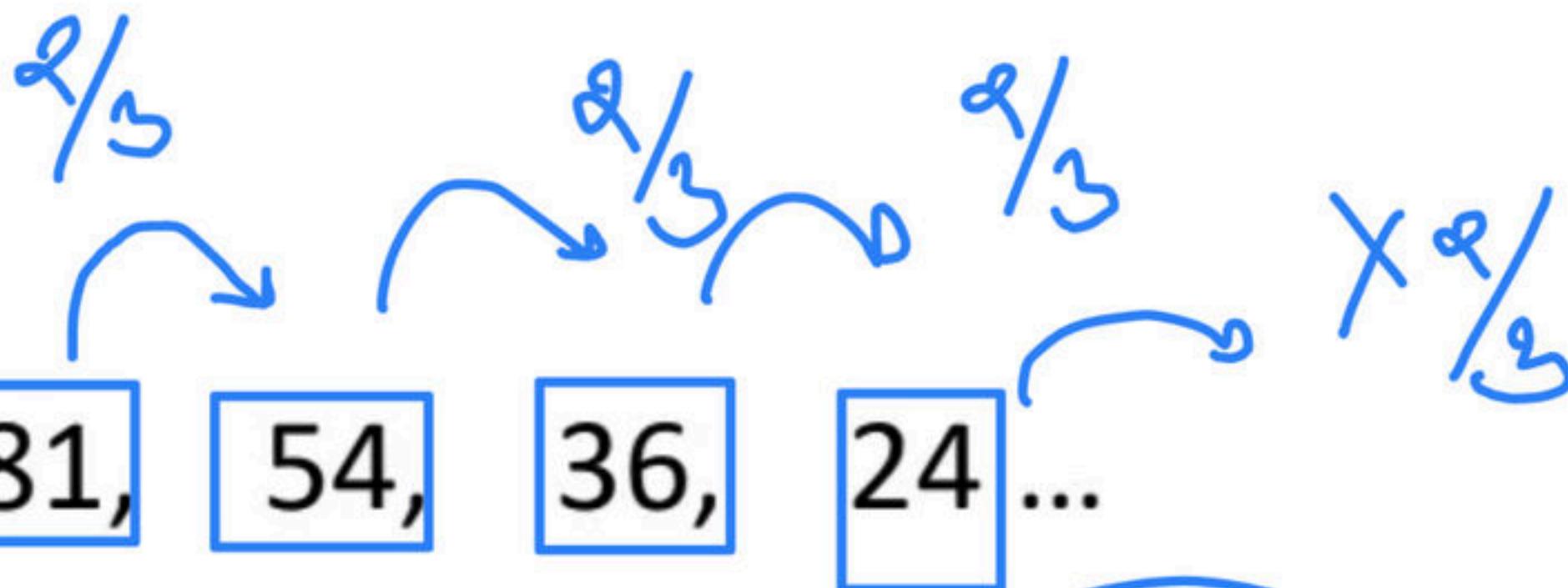




09

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The next term in the series 81, 54, 36, 24 ...



$$\underline{16.} = 24 \times \frac{2}{3}$$

[GATE 2014 : IIT Kharagpur  
(EC Set - 3, ME Set - 3)]



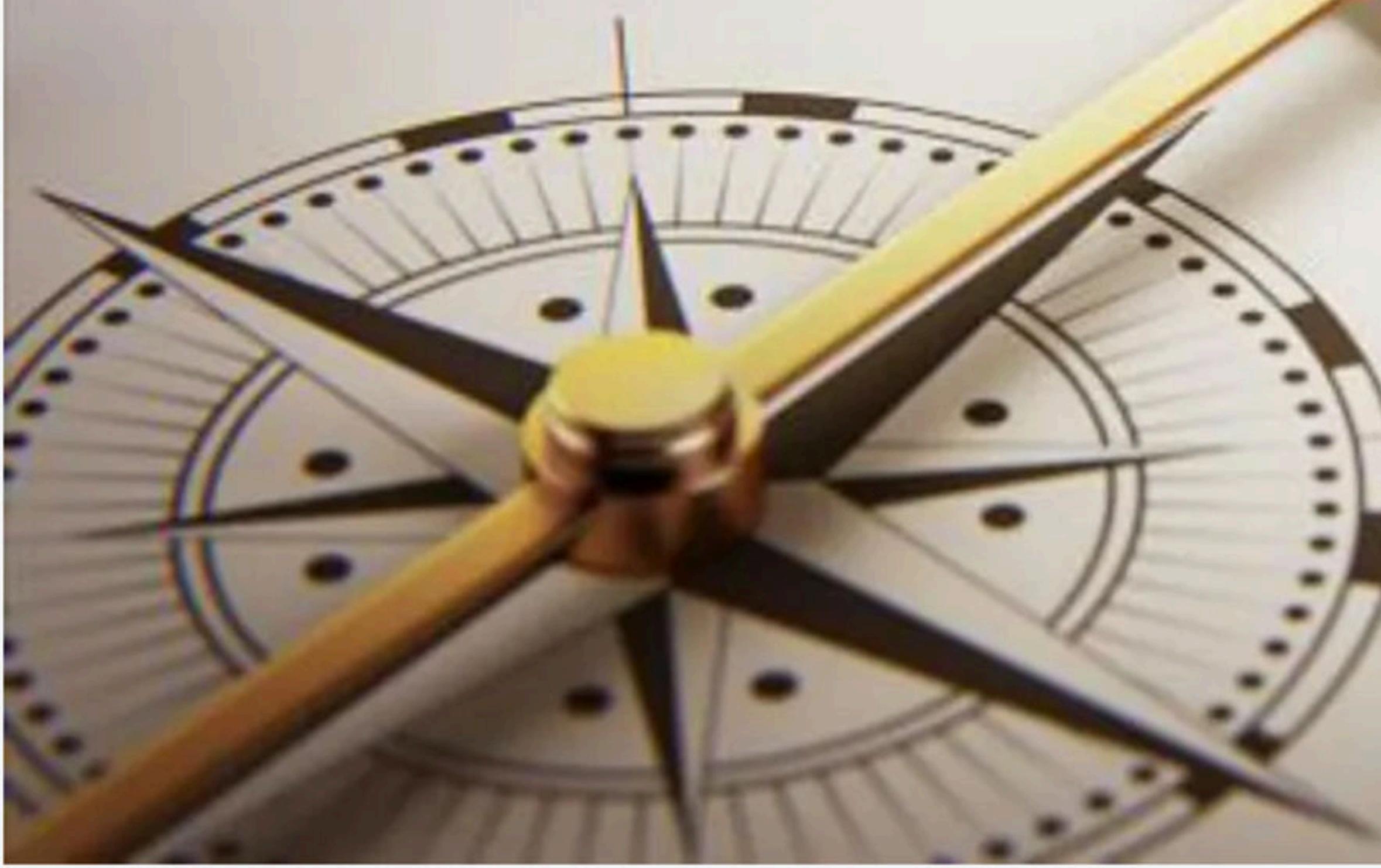
10

If 0,1, 2, .....7, 8, 9 are coded as 0, P, Q, ..... V, W, X, then 45 will be coded as

- (A) TS
- (B) SS
- (C) ST
- (D) SU

**GATE 2020**

-MISSION





12      13

Find the missing sequence in the letter series below:

A, CD, GHI, ?, UVWXYZ

(A) LMN

(B) MNO

(C) MNOP

(D) NOPQ



[GATE 2015 : IIT Kanpur (EC Set - 3, ME Set - 2)]



12

Find the missing group of letters in the following series :

BC, FGH, LMNO, \_\_\_\_\_.

- (A) UVWXY
- (B) TUVWX
- (C) STUVW
- (D) RSTUV

[GATE 2018 : IIT Guwahati (ME Set – 2)]



13



Given the sequence of terms, AD CG FK JP, the next term is

- (A) OV
- (B) OW
- (C) PV
- (D) PW

**[GATE 2012 : IIT Delhi (ME, CE, CSE)]**

A silhouette of a person standing on a mountain peak, holding a trophy against a bright sunset sky.

14



If ROAD is written as URDG, then SWAN should be written as:

- (A) VXDQ
- (B) VZDQ
- (C) VZDP
- (D) UXDQ

[GATE 2015 : IIT Kanpur  
(CE Set - 1, CSE Set - 3)]

15



Find the odd one from the following group:

W,E,K,O

I,Q,W,A

F, N,T,X

N,V,B,D

(A) W,E,K,O

(B) I,Q,W,A

(C) F, N,T,X

(D) N,V,B,D

**[GATE 2014 : IIT Kharagpur (EC Set-1, ME Set-1)]**