

Numbers

NUMBER SYSTEM

(Divisibility Rule)

NO. OF QUESTIONS	MAXIMUM DAYS	CLASS DURATION
10 Questions	1 DAY	2 HOURS

→ ② | ④ | 8 | ⑩

→ ③ | 6 | 9

⑦ → ⑤ | 10 | 25

→ ⑪

DIVISIBILITY RULES

Divisible by 2

Divisible by 4

Divisible by 8

Divisible by 16

Q:- if unit digit

Ex 1449 | 1046 | 0432

④ :- of last 2 digit //

Ex 48420 / 84324 / 92460

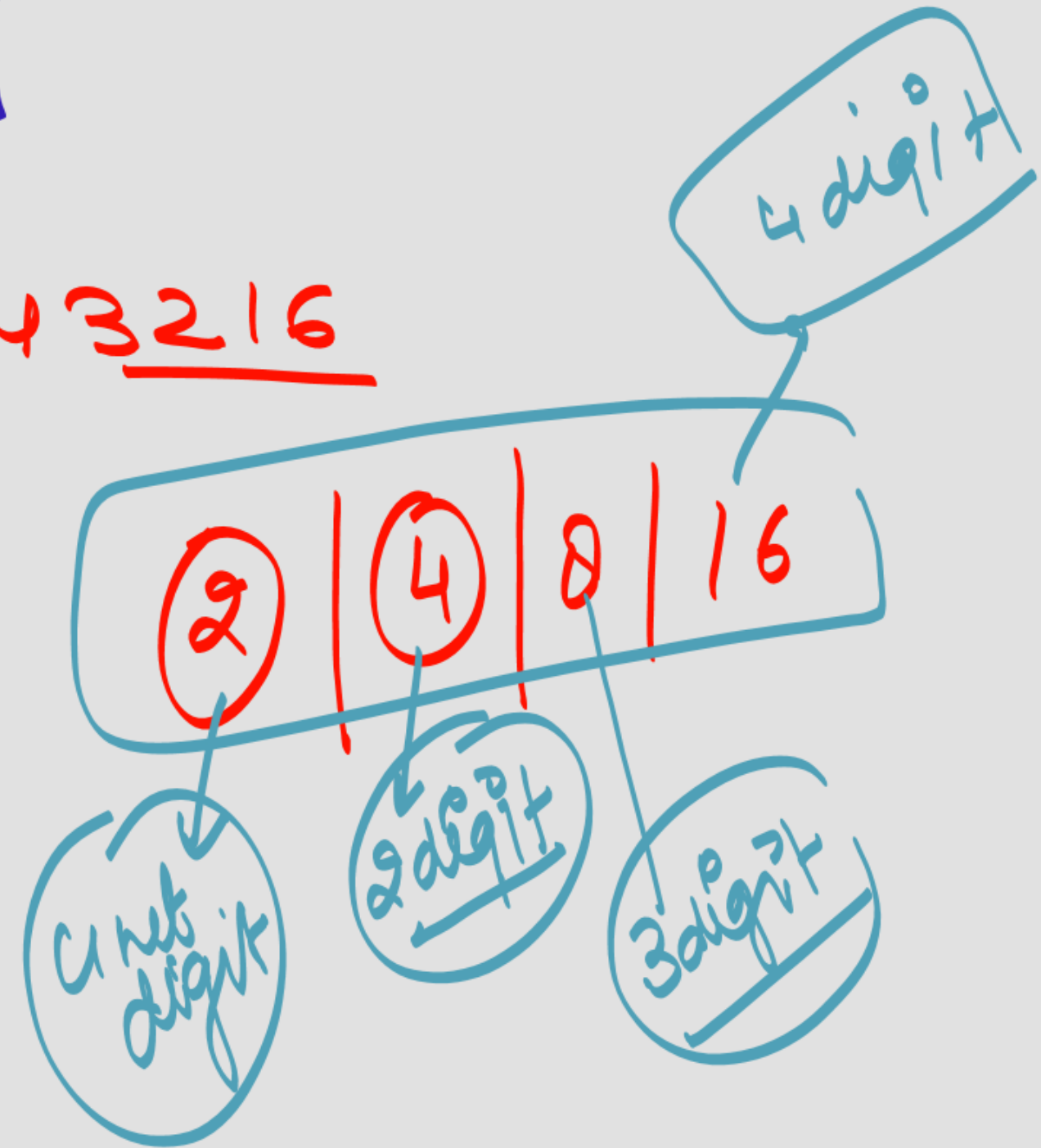
⑧ :- of last 3 digit

0400 | 04320 | 43240

2 | 4 | 8

16 :- of last 4 digit

Ex :- 18016 | 843216



CLASS EXERCISE

Question : What least no must be put in place of * so that the no 63576*2 is divisible by 8 ?

i) 1

ii) 3

iii) 2

iv) 4

(SSC CGL 2018 ,2019)

$$\begin{array}{r} 62 \\ 8 \overline{) 62} \\ \underline{48} \\ 14 \end{array}$$

Handwritten notes: A bracket on the left side of the division shows a remainder of 6. To the right, '62' is circled, and '72' is circled with a checkmark, indicating the correct value for the asterisk.

$$x = 0/1$$

If $6483\underline{\times 24}$ is divisible by 8.

$\times = ?$

$$\frac{42}{8}$$

24

$$\frac{x2\underbrace{(4)}_{\text{④}}}{8}$$

$$x=0 \mid 2 \mid 4 \mid 6 \mid 8$$

Note:- 2 4 8

CLASS EXERCISE

Question : If N is a 3-digit no. such that $n^2 = \dots\dots\dots 54$. Then find how many such numbers are possible for N ?

- i) 1 ii) 0 iii) 10 iv) none of these

(SSC CGL Mains 2015 , 2018)

$n^2 =$

54

$n = \text{even number}$

~~n^2 even~~ ~~even~~

multiple of 4

last 2 digit

if $84643\text{ * }12$ is divisible by 2
then find $\text{ * } = ?$

$$\frac{31}{8}$$

72

$$\frac{x12}{8}$$

$x =$				
1	3	5	7	9

2 | 4 | 8 | 16
128

DIVISIBILITY RULES

Divisible by 3

Divisible by 9

Divisible by 6

3 | 6 | 9 :-

③ :- Sum of digit

Ex :- 1842

$\text{Sum} = 1 + 8 + 4 + 2$

15

84321

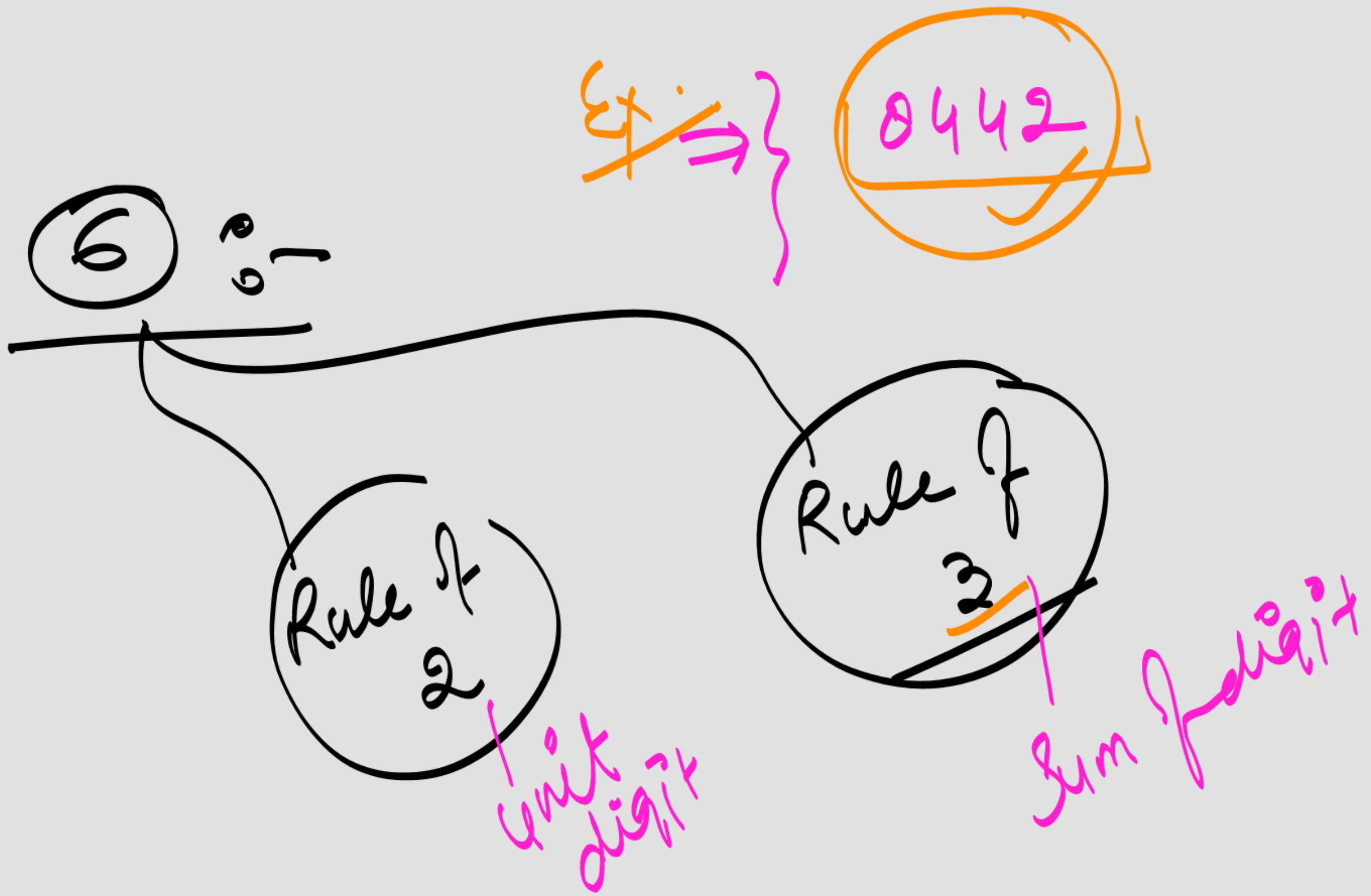
Sum = 18

Q:- Sum of digit

Example:-

84321
↓
Sum = 18

849636
Sum = 18



CLASS EXERCISE

Question : If 8567*92 is divisible by 3 then find the value of * ?

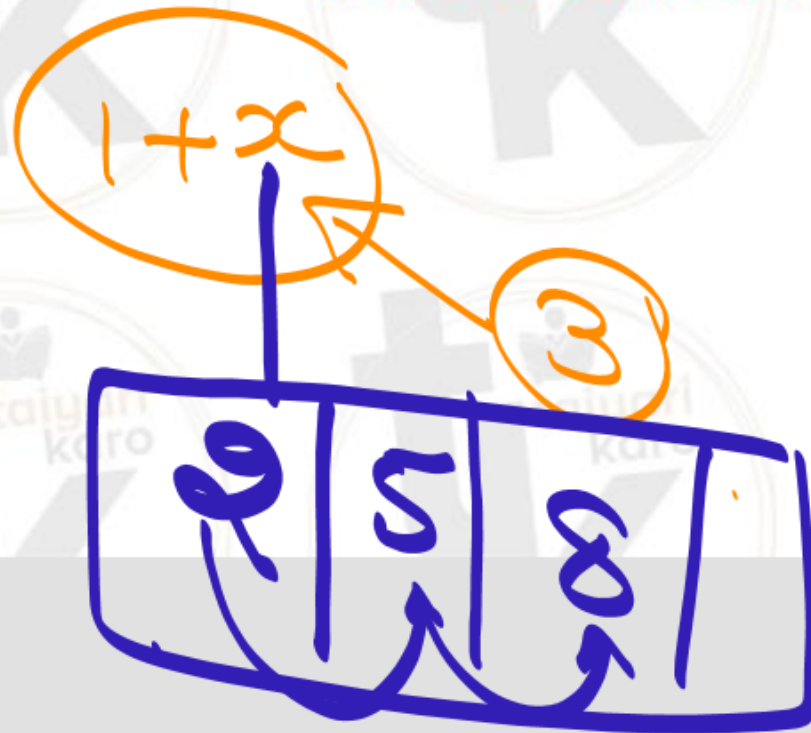
i) 2

ii) 5

iii) 8

iv) all of above

(CGL Pre 2016 , CPO 2015 , 2018)



CLASS EXERCISE

Question : What least value must be assigned in place of * so that no. $451*603$ is exactly divisible by 9?

I) 7

II) 8

III) 5

iv) 9

(CGL Pre 2017 , CPO 2018)

$$\begin{array}{r} 451*603 \\ \hline 1+x \end{array} \quad 9 \quad \square$$

$x = 8$

CLASS EXERCISE

Question : If 65A21B is an even number and it is divisible by 9 then find the sum of all the possible values of A ?

i) 18

II) 27

III) 18 or 27

IV) none

(CGL MAINS, CPO 2017)

$$S + A + 2 = 9$$

$$\begin{array}{r} 4 \\ 2 \\ 9 \end{array} \bigg| 0$$

$$\begin{array}{r} 0 \\ 2 \\ 4 \end{array}$$

$$\begin{array}{c} 7 \\ 5 \end{array}$$

$$\begin{aligned} A &= 4 + 2 + 0 \\ &\quad + 7 + 5 \\ &= 18 \end{aligned}$$

OR

$$= 4 + 2 + 9 + 7 + 5 = 27$$

$$B \rightarrow \begin{array}{|c|c|c|c|c|} \hline 0 & 2 & 4 & 6 & 8 \\ \hline \end{array}$$

CLASS EXERCISE

Question : When 335 is added to 5A7 then result is 8B2 . If 8B2 is completely divisible by 3 then What is the largest possible value of A?

I) 8

II) 5

III) 1

iv) 4

(CGL Mains 2014 , CHSL 2017)

$1 + B$

$2 \mid 5 \mid 8$

3

+

3	3	5
5	A	7
<hr/>		
8	B	2

3

$4 + A = B$

1

4