

A man deposited Rs.10,000 in a bank at 5% p.a. Simple Interest. Another man deposited Rs.8,000 at 10% p.a. Compound Interest. After 2 years what will be the difference in their interests?

$$\begin{array}{l}
 \text{S.I} \\
 = \\
 100\% \rightarrow 10000 \\
 10\% \rightarrow 1000 \\
 \downarrow \\
 \text{S.I} \\
 680
 \end{array}
 \quad \Bigg|
 \quad
 \begin{array}{l}
 \text{C.I} \\
 = \\
 100\% \rightarrow 8000 \\
 21\% \rightarrow 1680 \\
 \downarrow \text{C.I} \\
 a + b + \frac{ab}{100} \\
 10 + 10 + \frac{100}{100} = 21\%
 \end{array}$$

(TCS- NOV 2025)



A man purchased two products each price 3600 While selling on one at 24% profit and on other at 24% loss. What is his overall % profit and loss ?

$$\frac{+a+b}{2}$$

~~$\frac{+24-24}{2} = 0$~~

Same CP 

Two Products

Overall Profit = N

IQT)-2025



A vendor bought pen at 7 for Rs.6 and sold them at 2 for Rs.2. Find the profit %

$$\begin{aligned}
 &\Rightarrow \text{Pens for } G/ - \\
 &CP \text{ of each pen} = \left(\frac{6}{7} \right) \text{Rs} \\
 &SP \text{ of each pen} = \left(\frac{1}{6} \right) \text{Rs} \\
 &P.I. = \frac{SP - CP}{CP} \times 100 \\
 &= 1 - \frac{6}{7} \times 100 \Rightarrow \left(\frac{1}{7} \right) \times 100 = [6.66] \\
 &CP : SP \\
 &G : \frac{1}{6}
 \end{aligned}$$

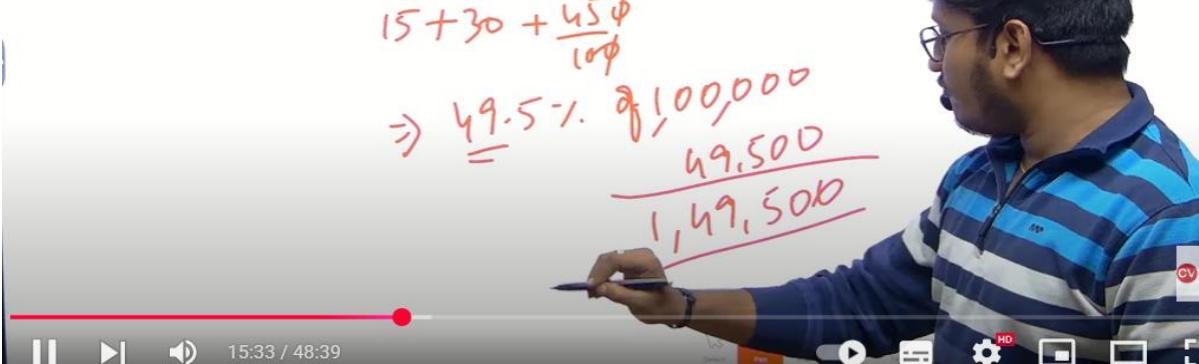
(TCS- NQT)-2025



The population of a village is 10,0000 in the present year. It increases by 15% in the next year, again it increases by 30% in the next year. What will be the total population after 2 years?

$$\begin{aligned} & a + b + \frac{ab}{100} \\ & 15 + 30 + \frac{15 \times 30}{100} \\ \Rightarrow & 49.5 - 1. \text{ of } 100,000 \\ & \frac{49.500}{1,49,500} \end{aligned}$$

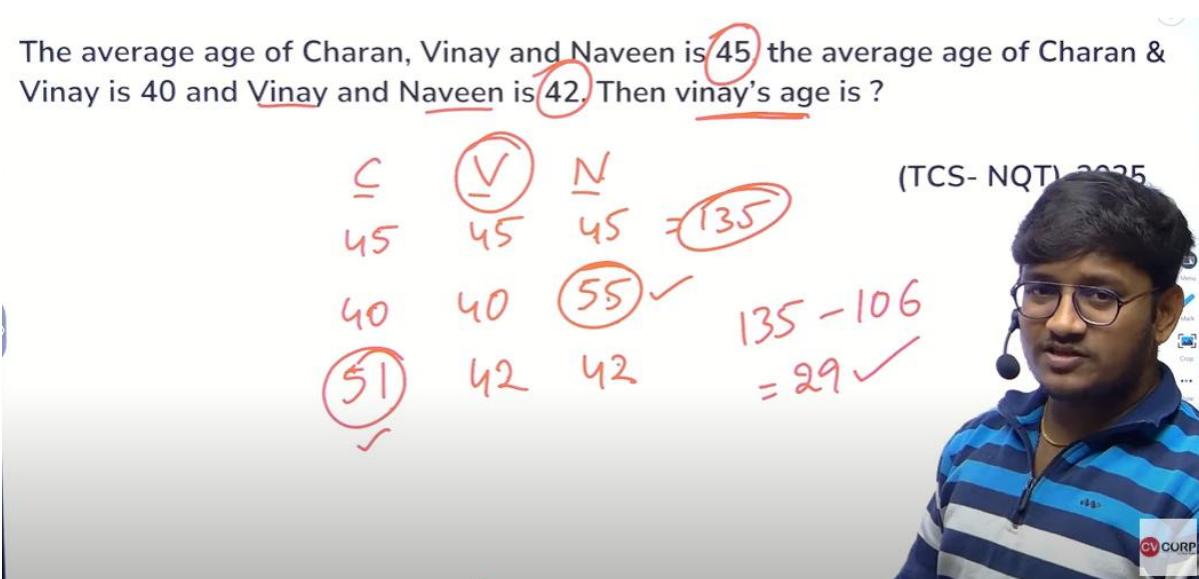
(TCS- NQT) 2025



The average age of Charan, Vinay and Naveen is 45, the average age of Charan & Vinay is 40 and Vinay and Naveen is 42. Then Vinay's age is ?

$$\begin{array}{ccc} C & V & N \\ 45 & 45 & 45 = 135 \\ 40 & 40 & 55 \checkmark \\ 51 & 42 & 42 = 29 \checkmark \end{array}$$

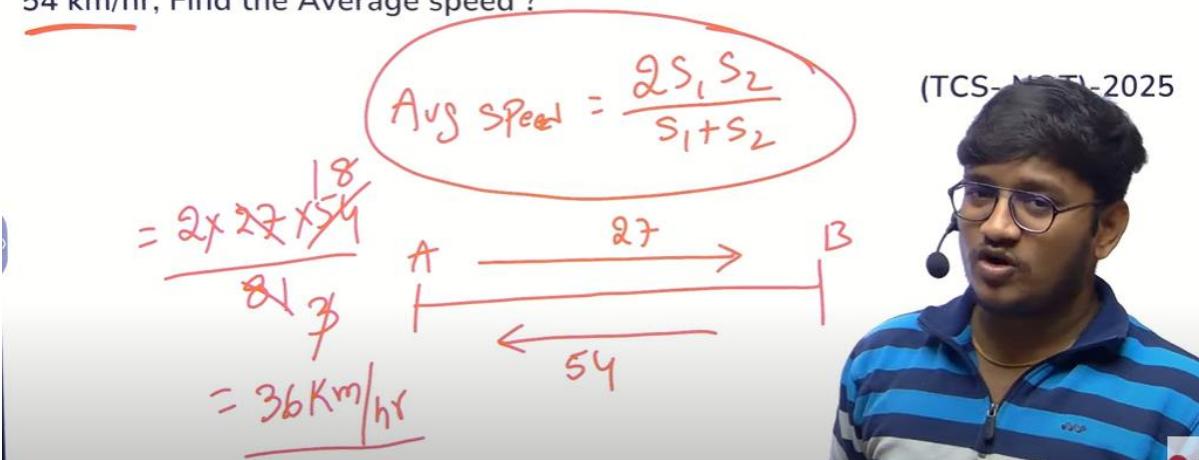
(TCS- NQT) 2025



A train moves from A to B at the speed of 27 km/hr, from B to A at the speed of 54 km/hr, Find the Average speed ?

$$\text{Avg Speed} = \frac{2S_1 S_2}{S_1 + S_2}$$

(TCS- NQT)-2025



A, B and C together can complete a work in 3 days. B alone can complete in 8 days, A alone can complete in 12 days. In how many days C alone can complete twice of the work?

$$TC = 24 \text{ cl}$$

$$\begin{aligned} A+B+C &\rightarrow 3 \text{ days} \rightarrow 8 \text{ cl} \\ B &\rightarrow 8 \text{ days} \rightarrow 3 \text{ cl} \\ A &\rightarrow 12 \text{ days} \rightarrow 2 \text{ cl} \end{aligned}$$

$$(TCS- NQ)$$

$$\frac{16}{3} \text{ days}$$

$$C \rightarrow 3 \text{ cl} \quad 16 \text{ days}$$



Find wrong term in the given series

HPX, GO, PXF, GLW, XFN, OWE

GLW



(TCS- NOT)-2025

$$\begin{array}{c} 8 \ 16 \ 24 \\ H \ P \ X \\ +8 \ +8 \end{array}, \quad \begin{array}{c} 7 \ 15 \\ G \ O \\ +8 \end{array}, \quad \begin{array}{c} 16 \ 24 \ 6 \\ P \ X \ F \\ +8 \ +8 \end{array}$$

$$\begin{array}{c} 7 \ 12 \ 23 \\ G \ L \ W \\ +5 \end{array}$$

$$\begin{array}{c} 24 \ 6 \ 14 \\ X \ F \ N \\ +8 \ +8 \end{array}$$

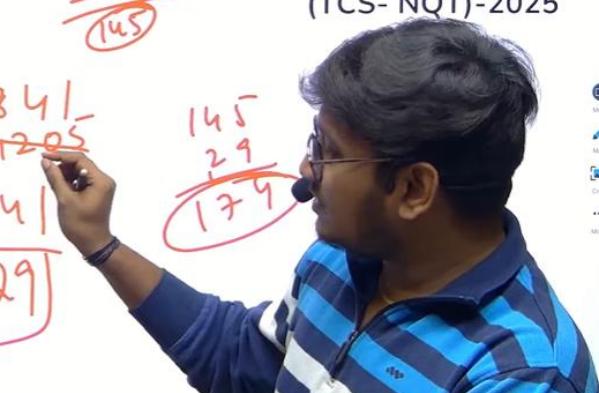
$$\begin{array}{c} 24+8=32 \\ 26 \ 27 \ 28 \ C \\ Z \ A \ B \end{array} \quad \begin{array}{c} 30 \ 31 \ 32 \\ D \ E \ F \end{array}$$



Product of two numbers is 4205. If the first number is 5 times the second number. Find the sum of two numbers?

$$\begin{array}{r} F \quad S \\ x \quad 5x \\ 29 \quad 145 \\ \hline 5x^2 = 4205 \\ 5x^2 = 4205 \\ x^2 = 841 \\ x = 29 \end{array} \quad \begin{array}{c} 29 \times 5 \\ (145) \end{array}$$

(TCS- NQT)-2025



A boat takes 6hrs to cover 30km distance in downstream, whereas it covers 21km in 7hrs upstream. What is the speed of the boat in still water?

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

$$S_s = \frac{1}{2}(D-U)$$

(TCS- NQT)-2025

$$\text{Downstream} - \frac{30}{6} = 5 \text{ Km/hr} \quad S_B = \frac{1}{2}(D+U)$$

$$\text{Upstream} = \frac{21}{7} = 3 \text{ Km/hr} \quad = \frac{1}{2}(8) \\ = 4 \text{ Km/hr}$$

A sum of money Rs. 3000, invests at 5% p.a in 5 years. Find simple interest?

$$100\% \rightarrow 3000$$

$$25\% \rightarrow ?$$

$\frac{1}{4} \times 3000$

$$SI = n \times r$$

(TCS- NQT)-2025

The ratio of Mean to Median is 3:5. Find the ratio of Mode to Median?

Mean : Median

$$3x : 5x$$

Mode : Median

$$9x : 5x$$

(TCS- NQT)-2025

$$\checkmark \text{Mode} = 3 \text{Median} - 2 \text{Mean}$$

$$= 3x5x - 2 \times 3x$$

$$= 15x - 6x$$

$$\text{Mode} \Rightarrow 9x$$

Find the LCM of 0.3 and 0.77?

$$0.3, 0.77$$

$$\frac{3}{10}, \frac{77}{100}$$

$$3, 7 + 11$$

$$\frac{21 + 11}{231}$$

$$\boxed{LCM = \frac{LCM \text{ for } Nx}{HCF \text{ for } Dy}} = \frac{LCM(3, 77)}{HCF(10, 100)}$$

$$\Rightarrow \frac{231}{10} \Rightarrow \underline{\underline{23.1}}$$

```

import java.util.*;
class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String sentence = sc.nextLine();
        sentence.toLowerCase();
        Set<Character> set = new HashSet<>();
        for(char ch : sentence.toCharArray()){
            if(ch >='a' && ch <= 'z'){
                set.add(ch);
            }
        }
        StringBuilder sb = new StringBuilder();// to store the
        result
        for(char ch='a';ch<='z';ch++){
            if(!set.contains(ch)){
                sb.append(ch);
            }
        }
    }
}

```

```

19.     if(sb.length() == 0){
20.         System.out.println(0);
21.     }else{
22.         System.out.println(sb)
23.     }

```

A number is 5 times of the other number. If their product is 980 calculate the sum of two numbers?

$$\begin{aligned}
 x &\quad 5x \\
 5x^2 &= 980 \\
 x^2 &= 196 \\
 x &= \sqrt{196} \\
 x &= 14
 \end{aligned}$$

14, 70

$\Rightarrow 84$

QT)-2025

If selling price when 15% loss is 3570, then what should be the selling price for 15% gain ?

$$\begin{aligned}
 85\% &\rightarrow 3570 \\
 115\% &\rightarrow x \\
 x &= \frac{3570 \times 115}{85} \\
 x &= 4830
 \end{aligned}$$

(TCS- Nov 2025)

Find simple interest on the 3560 at 15% p.a for 5 years?

$$\begin{aligned} SI &= \frac{PTR}{100} \\ &= \frac{3560 \times 5 \times 15}{100} \\ &= 2670 \end{aligned}$$

Percentage Trick

100% → 3560

75% → ?

2670

(TCS - NQT) - 2025

The income of two persons A and B are in the ratio 3:5 and expenditure are in the ratio 1:2 and their savings are 46000 each. Find the income of B?

$$\text{Income} = \text{Exp} + \text{Saving}$$

(TCS - NQT) - 2025

$$\begin{aligned} A : B &= 3 : 5 \\ I &\leftarrow (3 : 5) \times 1 \\ E &\leftarrow (1 : 2) \times 2 \Rightarrow 1 : 2 : 5 \\ S &\leftarrow 1 : 1 \end{aligned}$$

$$\begin{aligned} IP &\rightarrow 46000 \\ SP &\rightarrow ? \\ 46000 \times 5 &\rightarrow 23000 \end{aligned}$$

The population of a village is 2,20,000 in the present year. It increases by 10% in the next year, again it increases by 20% in the next year. What will be the total population after 2 years?

$$a + b + \frac{ab}{100}$$

$$10 + 20 + \frac{200}{100}$$

$$-132\cdot1$$

Present - 2,20,000

22000

2,42,000

48400

2,90400

(TCS - NQT) - 2025

If the average age of A, B & C is 45 years. The average of A & B is 41 years and the average of B & C is 46 years. Find the age of B?

(TCS- NQT)-2025

$$\begin{array}{ccc} A & B & C \\ 45 & 41 & \leftarrow 45 \Rightarrow 135 \\ 41 & (41) & (53) \Rightarrow 135 \\ 43 & 46 & 46 \\ A & B & C \\ 43 & 39 & 53 \\ 43+39 & 39+53 & 53+46 \\ 82 & 92 & 99 \end{array}$$

