# PERCENTAGES 2 - NEERAJ KUKREJA -26THAUG

Special class

RODHA • Aug 26, 2025

Arithmetic

10

min (7) concept

= 9 (5)

* Syllabus of OMET

+

95 percentile in CAT (Quant)

OMET

↑ (10-15)%

Rodha

# PERCENTAGE
# PART 2

# QUESTION BASED ON ELECTION

Rodha

Eligible → X

"Casted" → Y

Invalid → Z

Valid → Y-Z

Winner → K

Looser → (Y-Z) - K

A

56% Total

12% Invalid total

won → 12600

B → 32%

Voters

24% T → 12600

T → $\frac{12600 \times 100}{24}$ = 525

52500

Eg8(a). In an election between two candidates, 75% of the voters cast their votes out of which 2% of votes were declared invalid. A candidate got 9261 votes which were 75% of the valid votes. Find the total number of voters enrolled in that election.

(a) 16000 (b) 16400

(c) 16800 (d) 18000

$$\frac{75}{100} \times \frac{98}{100} \left[ \frac{75}{100} X \right] = 9261$$

$$\frac{75}{100} \times \frac{98}{100} \left[ \frac{75}{100} X \right] = \frac{9261}{1}$$

$$\frac{\text{cast}}{\text{valid}}$$

$$X = 16800$$

Topic

Basic Theory + Concept

Solved Question ] Majority Timed

Arithmetic → (300-350)

OMET → (1000-1200)

Eg8(b). In an election 2 candidates participated. 10% of the voters didn't vote. 300 votes were declared invalid and the winner got 60% of the voting list and won by 900 votes. Find the number of valid votes?

(a) 1800 (b) 2000

(c) 1200 (d) 1500

Total Voters → X

Cast → 90% X

Valid → 90% X − 300

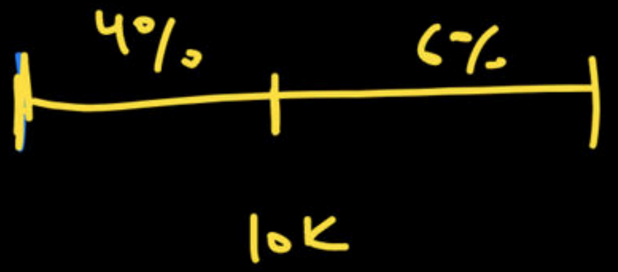
Winner → 60% X

Loser → 30% X − 300

$60\%X - (30\%X - 300) = 900$

$X = 2000$

Eg9(a). If a sales agent gets a commission of 4% on sales of first 10000 and a commission of 6% on the sales above 10000. If he has done a total sale of Rs.27000. Find his commission.



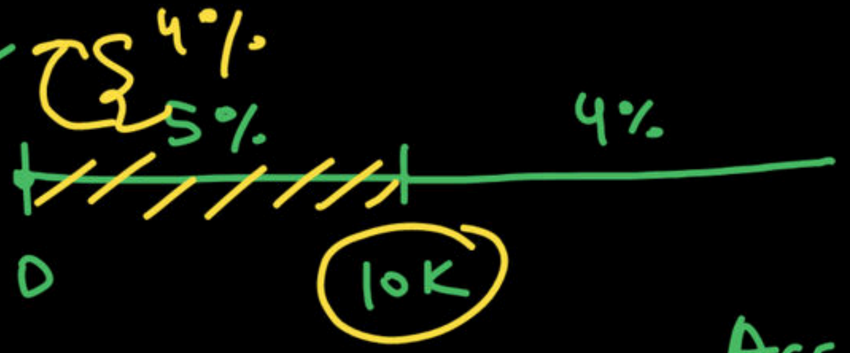

4% of 10000 = 400

6% of 17000 = 1020

Comm 1420

Eg9(b). A company gives 5% commission to his salesman upto the sale of 10,000 and a commission of 4% on the sales above 10,000. If the salesman deposited Rs. 31,100 in the company after deducting his commission then, find total sales.

(a) 31200
(b) 32500
(c) 34000
(d) None of these




Acc → 31100

Sales = x

Comm = 5% of 10000 + 4% (x − 10000)

⇒ 4%x + 100

x − (4% of x + 100) = 31100

X = 32500

1% of 10k → 100

96% S = 31200

$S = \frac{31200 \times 100}{96}$ = 25

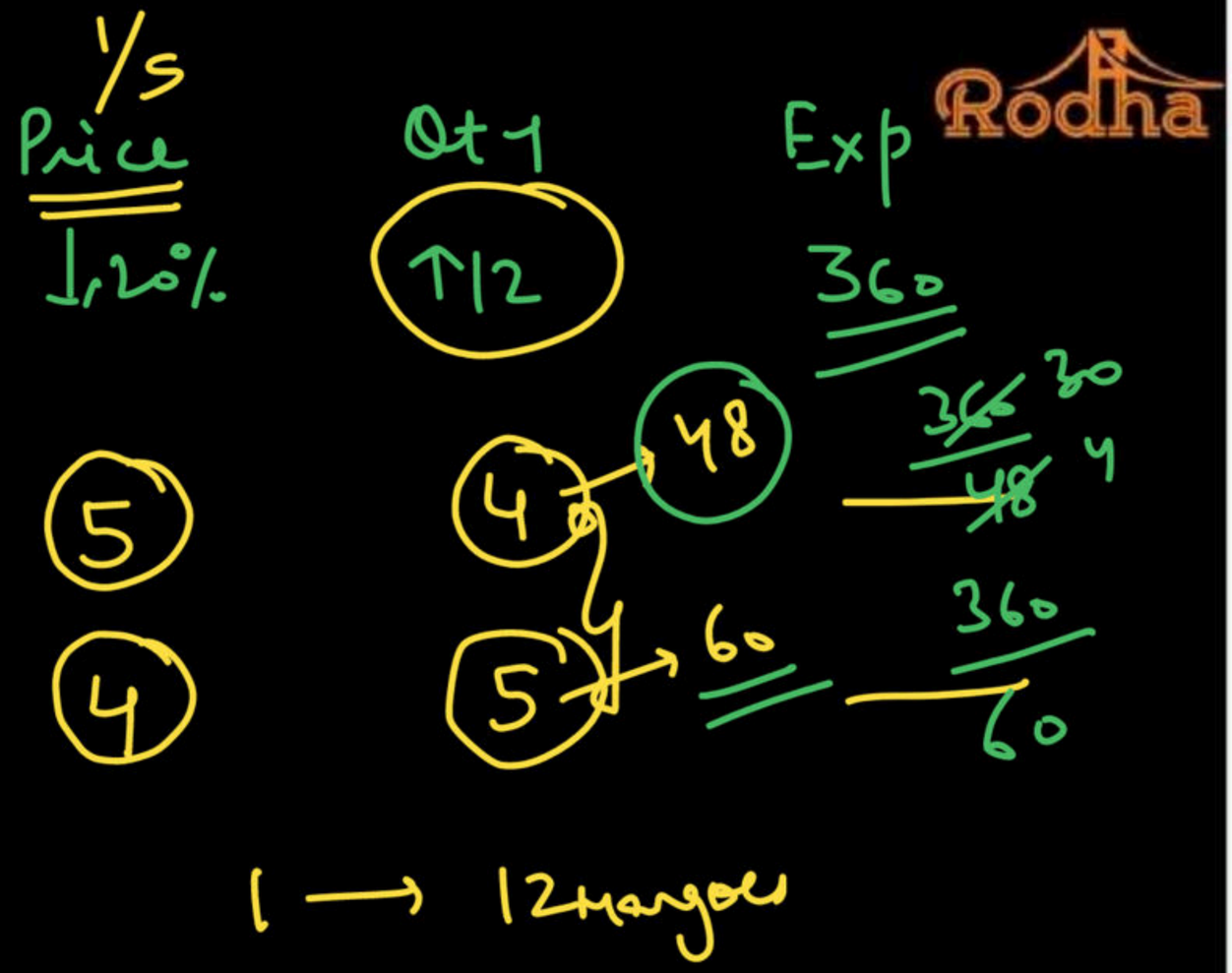
Eg10. If the price of mangoes is decreased by 20% because of which a person is able to purchase 12 mangoes more in Rs.360. Find:

(i) new price of one mango.

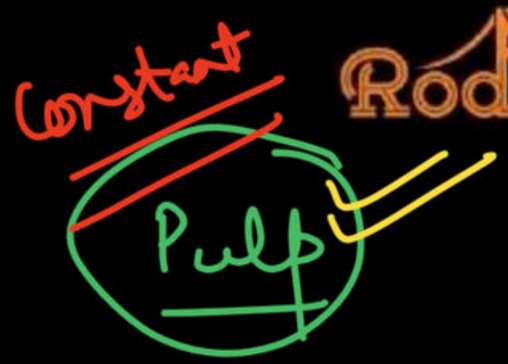
(ii) original price of one mango

(iii) new quantity which he can purchase in Rs.360.

(iv) original quantity which he was able to purchase in Rs.360.



Eg11(a). Fresh fruits contains 28% water and dry fruit contains 8% water. How many kgs of dry fruit can be obtained from 690 kg of fresh fruit?




Pulp

23 690 kg Fresh 72%.

18 ?: Dry 92%.

I

$\frac{18}{72\%}$ of $\frac{30}{690}$ = $\frac{23}{92\%}$ X

X = 540

II

$\frac{690}{23} \times 18$

540

Pulp Qty

F D

18 : 23

23 : 18

Eg11(b). 20 Kg fresh watermelon contains 96% water after some time some water evaporates and percentage of water become 95%. Find the present weight of watermelon?

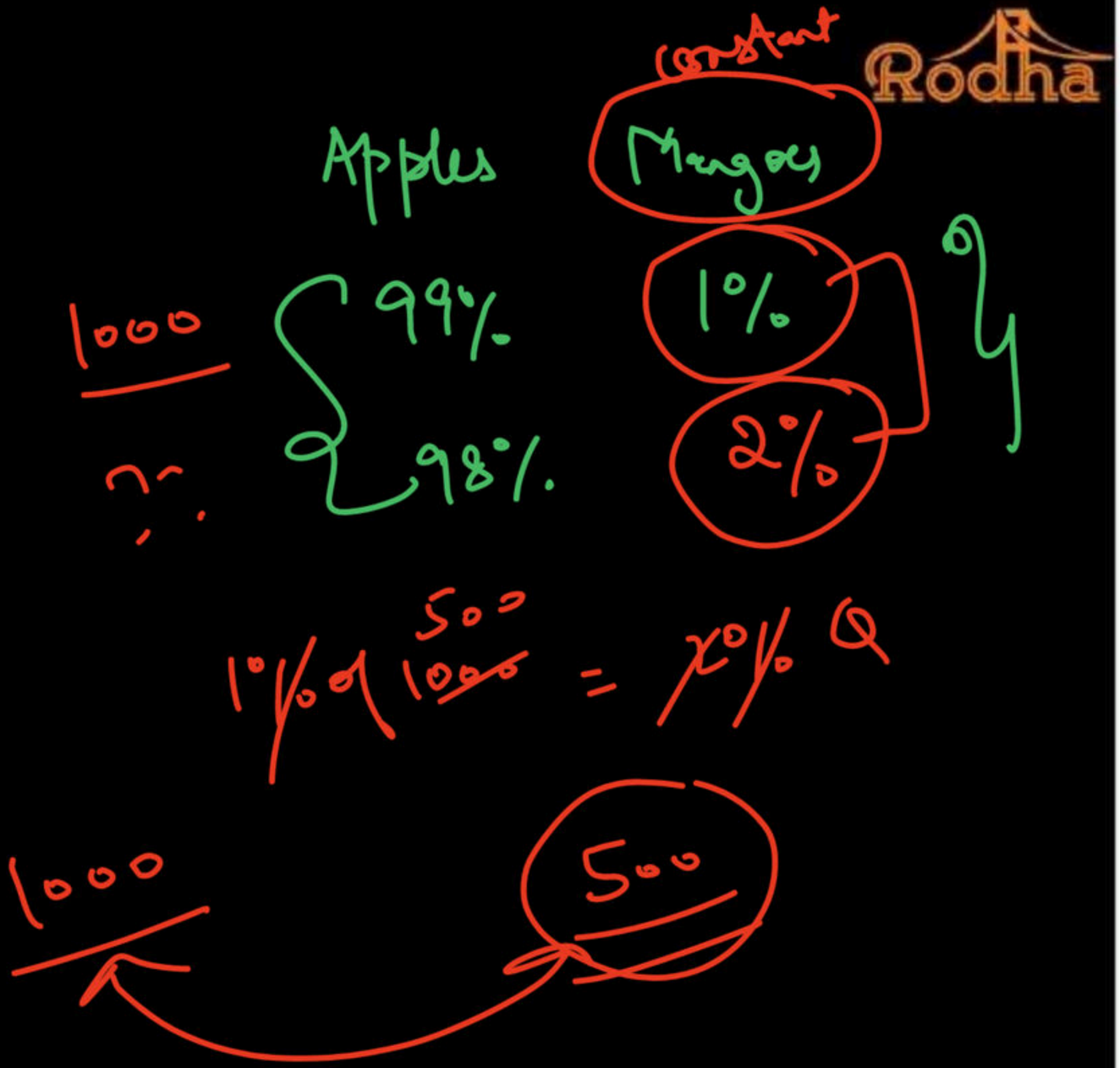
(a) 16
(b) 19
(c) 19.2
(d) None of these

$4\% \text{ of } 20 = 5\% \text{ of } x$

Eg11(c). At the start of a party, a basket, placed at the centre of the room, contained 1000 fruits, exactly 99% of which were apples. By the end of the party, the percentage of apples in the basket fell to exactly 98%. If it is known that all the guests ate only apples, how many apples did they eat?

(a) 10 (b) 20

(c) 50 (d) 500



Always operate on the component which is not changed.

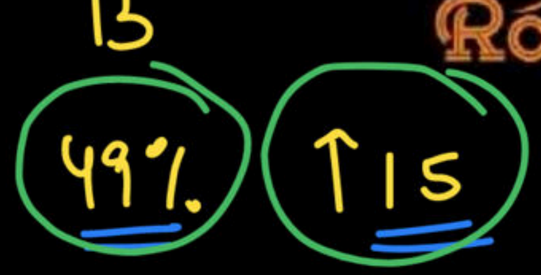
Eg12(a). In a certain exam A got 38 % marks and failed by 18 marks whereas B got 49 % marks and scored 15 marks more than the passing marks, then find :

(i) Maximum marks of the Exam 300

(ii) Passing Marks 132

(iii) Passing % 44%.

(iv) A's marks 114


11% → 33

Max → 300

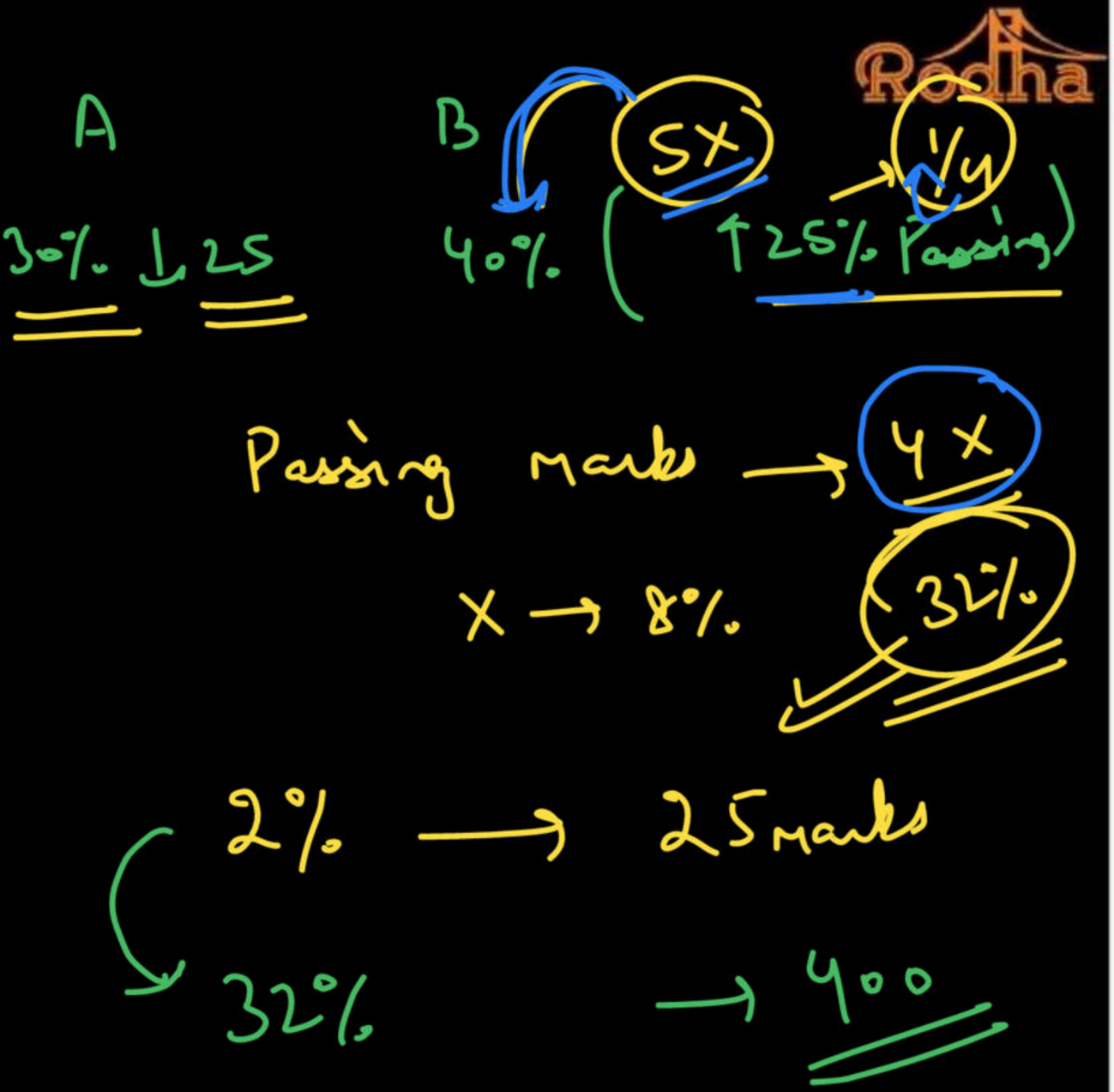
A → 38% (300) → 114 (+18 → 132)

$\frac{132}{300} \times 100$

Eg12(b). In a test a student got 30% marks and failed by 25 marks. In the same test another student got 40% marks and secured 25% marks more than the essential minimum pass marks. The pass marks for the test were

(a) 400 (b) 480

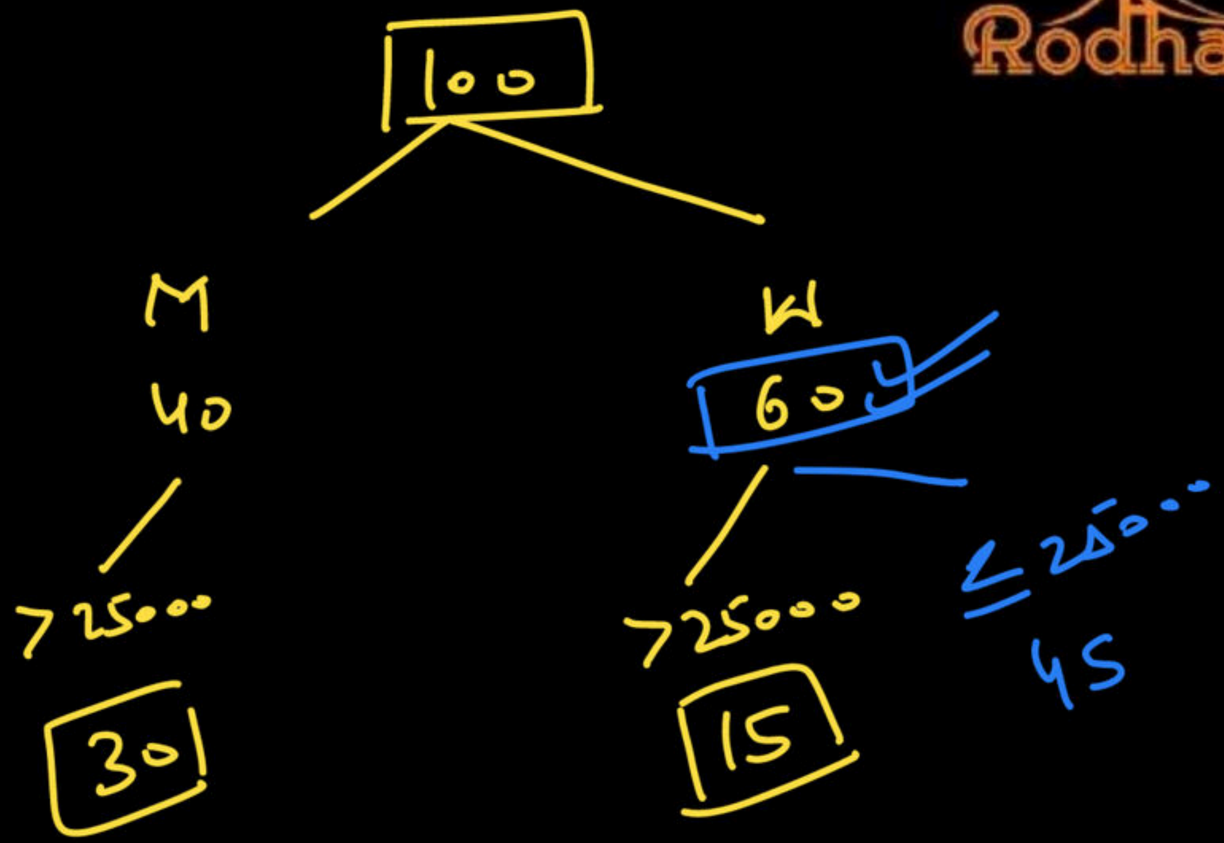
(c) 500 (d) 580



Eg13. 40% of the employees of a certain company are men and 75% of the men earn more than Rs. 25,000 per year. If 45% of the company's employees earn more than Rs. 25,000 per year, what fraction of the women employed by the company earns Rs. 25,000 per year or less?

(a) 3/8 (b) 1/4

(c) 3/20 (d) 3/4




45 3
60 4

**Eg14. The expenses on rice, fish and oil of a family are in the ratio 12:17:3. The prices of these articles are increased by 20%, 30% and 50% respectively. The total expense of family on these articles is increased by:**

(a) $14\frac{1}{8}\%$ (b) $7\frac{1}{8}\%$

(c) $56\frac{1}{8}\%$ (d) $28\frac{1}{8}\%$

I "Option"

II

1200 + 1700 + 300 = 3200

R F O

12 : 17 : 3

↑20% ↑30% ↑50%

240 + 510 + 150 = 900

$\frac{900}{3200} \times 100$

$\frac{225}{8}$

$28\frac{1}{8}\%$

Rodha

Eg15. In 2010, a library contained a total of 11500 books in two categories - fiction and nonfiction. In 2015, the library contained a total of 12760 books in these two categories. During this period, there was 10% increase in the fiction category while there was 12% increase in the non-fiction category. How many fiction books were in the library in 2015?

(a) 5700 (b) 6000

(c) 6300 (d) 6600

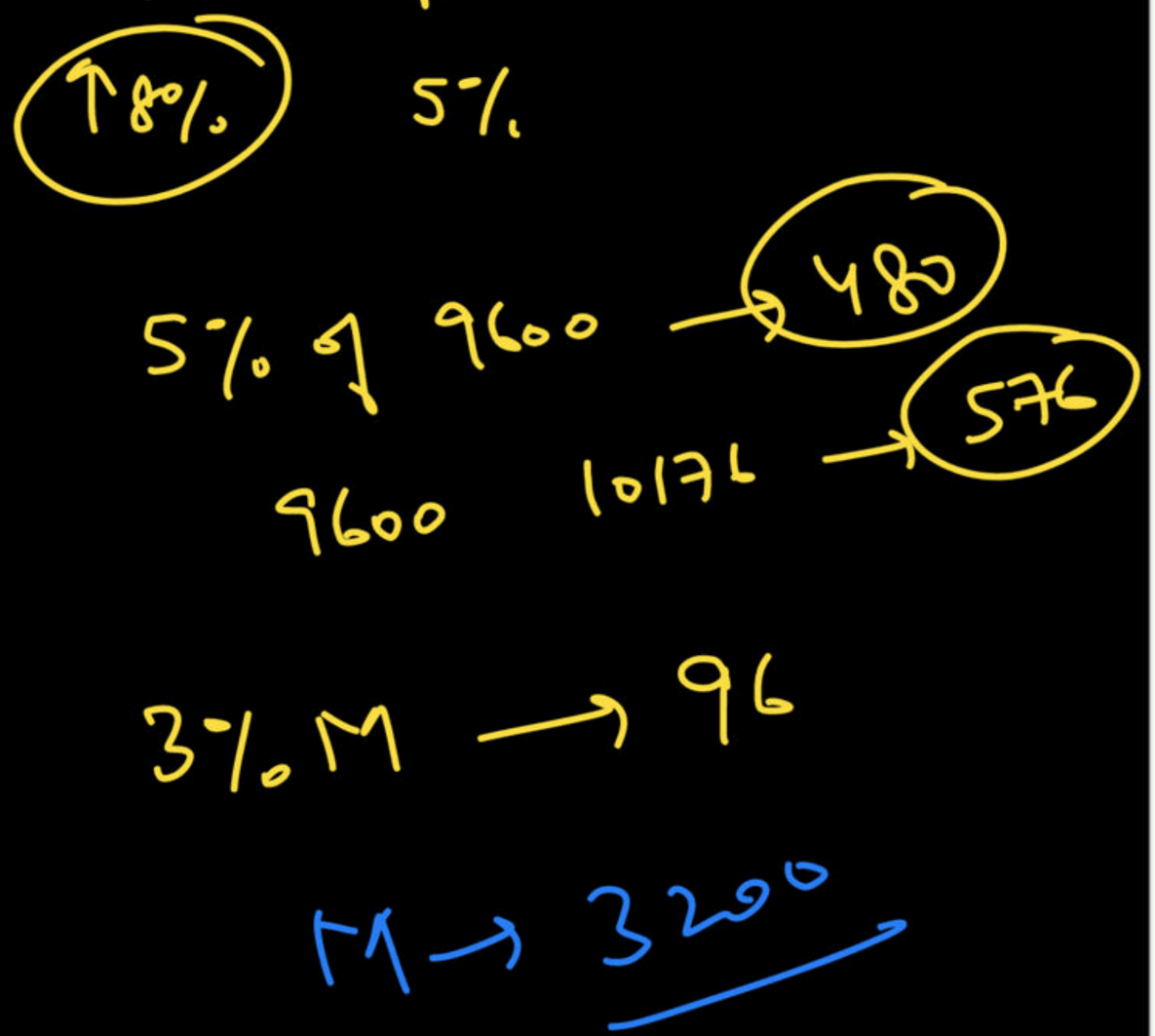

2% NF = 110

NF = 5500

Eg16. The population of village was 9600 if population of males increases by 8% & females increases by 5% then the new population of the village is 10176. Find the population of males before increases?

(a) 3200 (b) 4410

(c) 6400 (d) 6048



Eg17. Due to an increase of 30% in the price of eggs, 6 eggs less are available for Rs 7.80. The present rate of eggs for dozen is

(a) 4.48 (b) 4.58

(c) 4.68 (d) 4.78

3/10

Price Qty Exp

10 13 21

13 10 20

7.8 Rs

$\frac{39}{\cancel{780}} \times 12$

$\frac{\cancel{200}}{100}$

$\frac{468}{100}$

Eg18. Becuase of the reduction in prices of sugar, I was able to purchase 10% more sugar in 10% less amount. Find the percentage decrease in the price of sugar.

(a) 18.18%

(b) 20%

(c) 20.22%

(d) None of these

Price × Qty = Exp

P × 110% = 90%

$P = \frac{9}{11}$

$\frac{2}{11} \rightarrow 18.18\%$

Eg19. If the height of a cylinder decreases by 19%, by what percentage should the radius of the base be increased so that the volume of the cylinder remains constant?

(a) 10%

(b) 11.11%

(c) 19%

(d) 23.5%

$R^2 H = V$

$R^2 \quad 81\% = 100\%$

$R^2 = \frac{100}{81}$

$R = \frac{10}{9} \quad \frac{1}{9}$

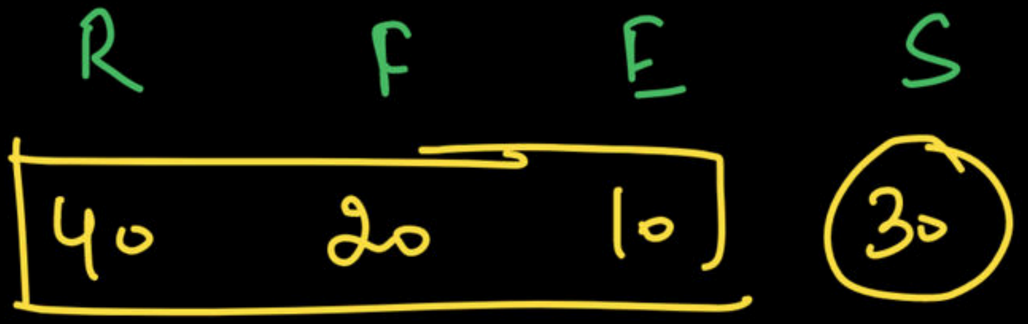
Eg20. Nitin spends 40% of the income on rent, 20% on food and 10% on education and rest he saves. Find his savings as a percentage of his expenditure?

(a) 30%

(b) 37.5%

(c) 42.84%

(d) 57.12%

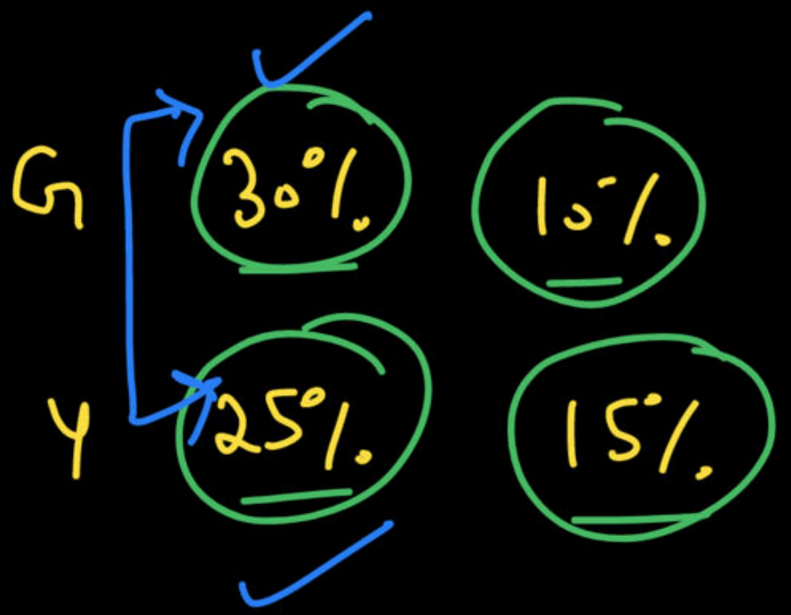



$$\frac{30}{70} \times 100$$

42.84%.

Eg21. Goibibo reduces the prices by 30% due to festive discount and further reduces the reduced price by 10% as loyalty bonus. Yatra.com reduces the prices by 25% due to festive discount and further reduces the reduced price by 15% as loyalty bonus. Which of them is giving a better deal to the customer (Assume that original prices are same on both the sites)?

(a) Goibibo
(b) Yatra.com
(c) Equal
(d) Cannot be determined



Eg22. Class A has 25% more girls than class B. Girls in class A are $16\frac{2}{3}\%$ less than boys in the class. Boys in class B are $33\frac{1}{3}\%$ more than girls in the class. Boys in B are how much percent more or less than boys in class A?

(a) 12.5% less

(b) 11.11% more

(c) 11.11% less

(d) 12.5% more

1/4

1/6

| A | B |
|---|---|
| 6 | $4\frac{4}{3}+\frac{12}{3}$ |
| 5 | 4 |

Boys

Girls

B A

16/3 : 6

16 : 18

8 9

1/9

18 : 16

9 : 8

1/9 x 100

Eg23. A person who has a certain amount with him goes to the market. He can buy 50 ornages or 40 mangoes with that amount . He retains 10 % of the amount for taxi fare and buys24 mangoes . Of the remaining amount he buys oranges . Find the number of oranges he bought

(a) 12 (b)15

(c)18 (d)20


II

500 = 40 M = 200

O → 40

M → 5

20 is T

24 x 5 = 120

60/4 → 15

Eg24. Aman gets Rs 79 per hour for his regular work and Rs158 per hour for his overtime work . He works altogether for 354 hours and his income from his overtime work is 15 % of his income from regular work . Find the no of hour he worked overtime ?

(a) 12

(b) 14

(c) 24

(d) 28

Reg  Over Time

Amt/h  1Rs/h : 2Rs/h

Time  100 : 75

Total Amt  100R : 15R

43 → 354

1 → 8hr

3 → 24hr