

Day 1 : 12.8.85

Percentage
=

1. 43% of 820 + 82% of 570 = ?

Soln:

$$43\% \text{ of } 820 = \frac{43}{100} \times 820 = 0.43 \times 820 = 352.6$$

$$82\% \text{ of } 570 = \frac{82}{100} \times 570 = 0.82 \times 570 = 467.4$$

$$352.6 + 467.4 = 820$$

2. If $x\%$ of 465 is 623, find 465% of $x+60$

Soln:

$$\frac{x}{100} \times 465 = 623$$

$$x = \frac{623 \times 100}{465} = \frac{62300}{465} = 134$$

$$465\% \text{ of } x+60 = \frac{465 \times 134}{100} + 60$$

$$= 623.1 + 60 = 683$$

3. An agent gets a commission of 2.5% on the sales of cloth. If on a certain day, he gets Rs 12.50 Commission, the cloth sold through him on that day is worth.

Soln: 2.5% of Sales = 12.50

$$\text{Sales} = \frac{12.50 \times 100}{2.5} = \frac{1250}{2.5} = 500$$

4. To a sugar solution of 6L containing 25% sugar, 2L of water is added. The percentage of sugar in the new solution is.

Soln:

Initial sugar content: $\frac{25}{100} \times 6 = 1.5 L sugar}$

Total solution: $6L + 2L = 8L$
(original) (added water)

New sugar percentage: $\frac{1.5}{8} \times 100 = 18.75\%$.

5. In a college there are 1800 students. Last day except 4% of the boys all the students were present in the college. Today except 5% of the girls all the students are present in the college, but in both the days number of students present in the college, were same. The number of girls in the college is?

Soln:

$$\begin{aligned} \text{No. of boys} &= x \\ \text{ " " girls} &= y \end{aligned} \quad \left. \begin{array}{l} x+y = 1800 \\ x+0.95y = 0.96x + 0.95y \end{array} \right\}$$

$$1^{\text{st}} \text{ day: } 96\% \text{ of boys} + 100\% \text{ of girls} = 1800 - 4\% \text{ of days}$$

$$2^{\text{nd}} \text{ day: } 100\% \text{ of boys} + 95\% \text{ of girls} = 1800$$

$$\text{Equating both, } 0.96x + y = x + 0.95y$$

$$0.04x = 0.05y$$

$$x = 1.25y$$

$$x+y = 1800,$$

$$1.25y + y = 1800$$

$$2.25y = 1800 \Rightarrow y = 800$$

6. Ankita is 25 years old. If Rahul's age is 25% greater than that of Ankita then how much percent Ankita's age is less than Rahul's age?

Soln: Rahul's age = 25% more than Ankita's age

$$\text{Rahul's age} = 1.25 \times 25 = 31.25$$

$$\text{Ankita's age} = \frac{31.25 - 25}{31.25} \times 100 = 20\% \text{ less.}$$

7. The cost of packaging of the oranges is 20% the cost of fresh oranges themselves. The cost of orange increased by 30% but the cost of packaging decreased by 50%, then the percentage change of the cost of packed oranges, if the cost of packed oranges is equal to the sum of the cost of fresh oranges and cost of packaging

Soln: Initial orange cost = 100%, packaging cost = 20%.

New orange cost = 130%, New " " = 10%.

$$\text{Total cost} = 130\% + 10\% = 140\%$$

$$\text{Increase in cost} = \frac{140 - 120}{120} \times 100 = 16.66\%$$

8. Entry fee in an exhibition was Rs. 1. Later, this reduced by 25% which increased the sale by 20%. Find the percentage increase in the number of visitors.

Soln:

$$\text{Reduction} = 25\%, \text{ Sales increase} = 20\%$$
$$\% \text{ Increase in visitors} = \frac{20 \times 100}{75} = 26.66\%$$

Ans: 30%. Ans: 60%.

9. Due to reduction of 20% price in wheat, A man can get 10kg more in Rs. 600. New rate of wheat is.

Ans: 12

Soln:

$$\text{Original Price} = x$$

$$\frac{80}{100}x \times \frac{600}{x} = 10$$

$$x = 15$$

10. The price of shirt is increased by 15% and then reduced by 15%. The final price of the shirt is:

Soln:

$$\text{Net change} = - \frac{(15 \times 15)}{100} = -2.25\%$$

1. The tank-full petrol in Arun's motor-cycle last for days. If he starts using 25% more every day, how many days will the tank-full petrol last?

Soln:

$$\text{New usage} = \frac{100}{125} \times 10 = 8$$

12. The number of seats in a Cinema hall is decreased by 8% and also the price of the ticket is increased by 4 percent. What is the effect on the revenue collected?

Soln:

$$\text{New Revenue} = 0.92 \times 1.04 = 0.9568 \rightarrow 1,321. \text{ decrease}$$

(13) A reduction of 20% percent in the price of rice enables a housewife to buy 5 kg more for rupees 1200. The reduced price per kg of rice

Soln:

$$\text{New price} = \frac{1200}{5+25} = 48 \quad \text{Ans: } 48$$

14. Price of rice is increased by 20%, expenditure is only 20 percent more than before. If 50 kg of rice is consumed by family before, then find the new consumption of family.

$$\text{New Consumption} = \frac{50 \times 1.2}{1.8} \approx 46$$

15. Valid votes Calculations

$$\text{Total valid votes} = 7500 \times 0.8 = 6000$$

$$\text{Votes for other candidate} = 6000 \times 0.45 = 2700$$

16. Picketless Travellers : Ans : 3591

$$\text{April} = 4000 \times 1.05 \times 0.95 \times 0.9 = 3570$$

Ans : 3570

17. Cuboid Volume Increase

$$(1.1 \times 1.1 \times 1.2) = 1.452$$

$$\% \text{ increase} = (1.452 - 1) \times 100 = 45.2\%$$

18. Officer's Salary Calculation

Let total salary be x

$$x \times 0.85 \times 0.9 \times 0.9 = 826$$

$$x = 12000$$

19. Library Book Calculation

Ans : 20000

Remaining books = 4200

$$\text{Total Books} = \frac{4200 \times 100}{7} = 6000$$

20. Car Insurance Calculation

$$\text{Insurance Amount} = 450000 \times 0.8 \times 0.9 = 324000$$

$$\text{Difference} = 450000 - 324000 = 126000$$

~~✓ DRAFT~~



Day - 2 : 13.3.25

1. Total % spend on Items = 91% + 23%
 Remaining % of 100% $\{$ so
 that is given.
 $\therefore 100\% = 5600$
 $56\% = 3136$

2. A num any num, consider 15

$$\frac{3}{5} \times 15 = 9$$

$$25 - 9 = 16$$

$$\frac{5}{3} \times 15 = 25$$

$$\frac{16}{25} \times 100 = 64$$

3. watermelon = 201 g.

96% water 4%

0.8 kg (This value)

After evap

95% water 50%

5% = 0.8 kg

50% = 8

100% = 16 kg

4. water bucket

75% 25%

(dirt) \downarrow constantRemaining 25%. 25% \rightarrow i. Total 50%.

$$\frac{50}{75} \times 100 = 66.66\%$$

	A	B	C
	98%	70%	91
	98	70	: 100

diff 2 part = 1206 (given)

$$2P = 1200$$

$$1P = 600$$

$$\therefore 100 \text{ part} = 600 \times 100$$

$$[60000]$$

6. A 30% mark 90

B 40% mark 115
10%

consider pass
percent as 100

$$10\% = 25$$

$$100\% = 250$$

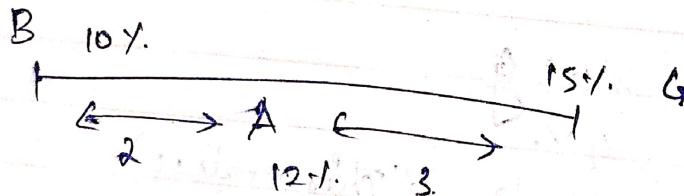
∴ max mark 250

pass mark 30% mark
+ 10

$$115 + 10$$

$$\boxed{\text{pass mark} = 85}$$

7.



$$2 = 2 : 3$$

$$10 = 3 : 2$$

$$B 4$$

$$\text{total } 5000$$

$$B : 4$$

$$3000 : 2000$$

$$10\% : 15\%$$

$$\boxed{300 : 300}$$

$$\therefore 4 = 2000$$

8. 8% 100

10% 150

4% 50

Bonus = 50 Rupees

$$9. \text{ Tax} = 40 \text{ P} \Rightarrow \text{Rs. } 0.4$$

$$\therefore 10\% = 12 \text{ Rs. } 0.4$$

100% = 4 Rupees

Cost of tax-free items = $60 - 4 = 56$

$$\boxed{\begin{array}{l} \text{Cost of} \\ \text{tax} \end{array}} = 55.6 \text{ P}$$

10. Boys Fair

Boys 28 32 60%

Girls 32 8 40%

60%

$$\frac{32}{60} \rightarrow \frac{16}{30} \times 100 = 53.3\bar{3}\%$$

30

11. M P C

1 2 3 44.1

100 200 300 ~~$\frac{365}{600}$~~

40% 60% 35%

40 120 105

$$\boxed{44.1\%}$$

	A	B	AB
	100	200	300
	+20%		+30%
	120	270	360

$$\frac{70-35}{200} \times 100 = 35\%$$

13. Science = 50%.
 Social = 75%.
 Fail = 20%.
 Pass = 270.

$\therefore 45\% = 270$
 $100\% = 600$

100% total no. of stud. \therefore Pass % = 80%.

Pass % = 80% + 50% = 130%.

Pass % = 45%.

14. $\frac{25}{100} \times \text{total} = \text{pass} - 30 \rightarrow ①$

$\frac{50}{100} \times \text{total} = \text{pass} + 20 \rightarrow ②$

$$② - ① \Rightarrow \frac{25}{100} \times \text{total} = 50$$

$$\therefore \text{total} = 200$$

15. 21 kg price = $20 \times \text{Rs. } 9 = \text{Rs. } 180$ (cp)

21 kg price = $21 \times \text{Rs. } 10 = \text{Rs. } 210$ (sp).

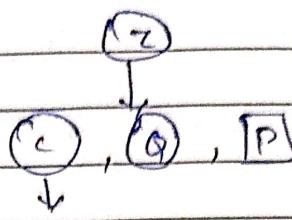
$$\text{Profit \%} = \frac{210 - 180}{180} \times 100 = 16.66\%$$

16. $60\% = 420$

$100\% = x$

$x = \frac{420}{60} \times 100 = 700$

21.



Ans : (B)

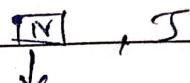
17. $48 + 48 = 96 = 80\%$

$80\% = 96$

$100\% = x$

$x = \frac{96}{80} \times 100 = 120$

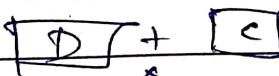
22. (d) $I \times C + N - I$



(D), (C)

18. $1500 \times \frac{80}{100} \times \frac{45}{100} = 2700$

23.



Ans (d)

19. $x:y$

$120 : 100 \Rightarrow 6 : 5$

Total $\Rightarrow 11 = 550$

$5 = y$

$y = \frac{550 \times 5}{11} = 150$



Ans : (C)

20.

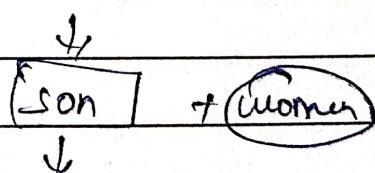
962500

175000

87500

$$\text{per year} = \frac{87500}{10} \\ = 8750$$

$$\therefore = \frac{8750}{175000} \times 100 = 5\%$$



Ans : (D)