

1.	<p><b>Ans: []</b></p> <p><b>Solution:</b> <math>(4725 \times 100 \times 100 / (100 - 10)(100 - 85)) = 350 \text{ m}</math></p> <p><b>Or</b></p> <p>Let it be 100 m</p> <p>10% loss = 90 m</p> $90 \times \frac{15}{100} = \frac{27}{2} m$ $\frac{27}{2} \rightarrow 100m$ $\frac{189}{4} \rightarrow \frac{100 \times 89}{4 \times 27} \times 2 = 350$
2.	<p><b>Ans: []</b></p> <p><b>Solution:</b> let the total quantity be x</p> <p>90% of x = 31.5</p> <p><math>X = (31.5 \times 100) / 90 = 35</math></p>
3.	<p><b>Ans: []</b></p> <p><b>Solution:</b> let the total employees be p</p> <p>No of men earning more than 50000 = <math>50\% \times 60\% \times p</math></p> <p>Total women earning more than 50000</p> <p><math>45\%p = 50\% \times 60\% \times p + w</math></p> <p><math>w = 0.15p</math></p> <p>No of women earning less than 50000 = <math>0.40p - 0.15p = 0.25p</math></p> <p>% value = <math>(0.25 / 0.40) \times 100 = 62.5\%</math></p>
4	<p><b>Ans: []</b></p> <p><b>Solution:</b> let the income be x</p> <p>Expenditure = <math>0.66x</math></p> <p>New income = <math>x + 800</math></p> <p>Expenditure = <math>50\%(x + 800)</math></p> <p><math>0.66x = 0.50x + 0.50 \times 800</math></p> <p><math>x = 2500</math></p>
5	<p><b>Ans: []</b></p> <p><b>Solution:</b> overall gain during 1<sup>st</sup> week</p> <p><math>24 \times 7 \times 2 / 100 = 3.36 \text{ hrs}</math></p> <p>Overall loss during next 10 days</p> <p><math>24 \times 10 \times 3 / 100 = -7.20 \text{ hrs}</math></p> <p>To calculate over all loss</p> <p>7:12:00</p> <p>3:21:36</p> <p>Subtracting two values</p> <p>We get overall loss of 3hrs 50 mins and 24 sec</p> <p>8:09:36</p>
6	<p><b>Ans: []</b></p> <p><b>Solution:</b> <math>\{lb - 0.25lb\} \times 100 / lb = 75\%</math></p>
7	<p><b>Ans: []</b></p>

	<b>Solution:</b> $100 \times 100 / (100 + 10) = 11.11\%$
8	<b>Ans:</b> [] <b>Solution:</b> Let the weight of empty bucket = X Kg  Weight of liquid filled initially = Y kg  weight of an empty bucket is 25% of the weight of the bucket when filled with some liquid  $\Rightarrow X = 25\% \text{ of } (X+Y)$ $\Rightarrow X = 0.25(X+Y)$ $\Rightarrow X - 0.25X = 0.25Y \Rightarrow 0.75X = 0.25Y \Rightarrow 3X = Y$  Now some liquid is removed, the bucket, along with the remaining liquid $= \frac{3}{5}(X+Y)$  Hence , the weight of the liquid withdrawn $= \frac{2}{5}(X+Y) = \frac{8Y}{15}$  So , the fractional part of the liquid removed $= 1 - \frac{3}{5} = \frac{2}{5}$
9	<b>Ans:</b> [] <b>Solution:</b> Amount left $= \{4131 \times 100 \times 100 \times 100\} / 90 \times 90 \times 85 = 6000$
10	<b>Ans:</b> [] <b>Solution:</b> let total fruits be x Remaining fruits $= 0.80x$ ATQ $0.25 \times 0.80X + 30 \times 12 = 0.80X$ $X = 600$ Fruits at cold storage $= 0.25 \times 0.80 \times 600 = 120$
11	<b>Ans:</b> [] <b>Solution:</b> A=X B=X/2 C=C D=40%125%X=0.5X E=125X/100=1.25X Both B & D
12	<b>Ans:</b> [] <b>Solution:</b> Let the max marks be x $30\%x + 20 = 40\%x - 20$ $0.30x + 20 = 0.40x - 20$ $X = 400$
13	<b>Ans:</b> []

	<b>Solution:</b>
14	<b>Ans: []</b> <b>Solution:</b>
15	<b>Ans: []</b> <b>Solution: weight of flesh in fresh and dried grapes shall remain constant</b> <b>The weight of water content changes</b> <b>Let the total weight of dried grapes be x</b> <b>So</b> $2 + 20\%x = x$ $X = 2.5$
16	<b>Ans: 20</b> <b>Solution:</b> Let the person has x Rs , then price of 50 oranges or 40 mangoes is x Rs. Therefore, from given information $x = (x / 10) + (x / 2) + \text{Amount left}$ . Hence, the amount left to buy oranges is $(2x / 5)$ , since price of 50 oranges or 40 mangoes is x Rs , hence price of 1 orange, 1 mango is $(x / 50)$ , $(x / 40)$ respectively. Hence, he can buy $(2 / 5) \times 50 = 20$ oranges.
17	<b>Ans: 600</b> <b>Solution:</b> Suppose total no. of votes is x and Candidate with 62% votes be m and Candidate with remaining 38% votes be n.  Given that, $m - n = 144$ $\Rightarrow .62x - .38x = 144$ (putting values of m and n) $\Rightarrow x = 144 / .24$ $\Rightarrow x = 600$
18	<b>Ans: 105</b> <b>Solution:</b> The 35 litres occupies (100-75)% of the tank. ----- Proportion: Let x litres be the capacity of the tank $n / (100 - 75)\% = x / 100\%$ ----- $x = 35 / (100 - 75)\%$ ----- The tank already has 35 litres in it. You need $[35 / (100 - 75)\%] - n = [100 \times 35 / (100 - 75)] - n$  $= (35 \times 75) / (100 - 75)$ litres to fill the tank = 105 ltr
19	<b>Ans: 40</b> <b>Let n be numenator and d be denominator</b>  $\frac{n}{d}$ <b>Solution:</b> $\frac{n}{d} -$

	$\frac{.75n}{1.25d} = \frac{1.25dn - .75dn}{1.25d^2} = \frac{.5dn}{1.25d^2} = \frac{.5n}{1.25d} = \frac{n}{2.5d} = .4\left(\frac{n}{d}\right)$ <p><b>a 40% decrease</b></p>
20	<p><b>Ans: 400</b></p> <p><b>Solution:</b> let x be the amount he had</p> $x - x/3 - 4x/15 - x/5 = 300$ $3x/15 = 300$ $X = 1500$ <p><b>Amount spend on food = <math>4x/15</math></b></p> <p><b>400</b></p>
21	<p><b>Ans: 82</b></p> <p><b>Solution:</b> Let the square have sides of 10 cm. Hence its area is <math>10 \times 10 = 100</math> sq cm. The sides of the rectangle are 14 cm (40% more than 10 cm) and 13 cm (30% more than 10 cm), so its area = <math>14 \times 13 = 182</math> sq cm.</p> <p>So the increase in area of the rectangle over that of the square is <math>(182 - 100)/100 = 82/100</math> or 82 %.</p>
22	<p><b>Ans: 4</b></p> <p><b>Solution:</b> Here we can assume that one subject is of 100 marks so total there are 5 subjects <math>\Rightarrow 100 \times 5 = 500</math>. Now according to the question he secured 60 % of those which is 60% of 500 = 300 marks in total.</p> <p>The ratio between the marks is given as 6 : 7 : 8 : 9 : 10 , so now we can distribute 300 marks according to the ratio.</p> <p>Total ratio = 40 For 6 : <math>(300/40) \times 6 = 45</math> Similarly , we will get for others as 52.5 , 60 , 62.5 , 75.</p> <p>Hence , there are 4 subject where he secured more that 50 %.</p> <p>The answer is 4.</p>
23	<p><b>Ans: 40</b></p> <p><b>Solution</b> Since 15% of the original 20 liters is NON-gasoline, the amount of non-gasoline = <math>.15(20) = 30</math> liters.</p> <p>After pure gasoline is added to increase the gasoline percentage to 95%, these 30 liters 5% of the new total: <math>30 = .05t</math> <math>t = 30/.05 = 60</math></p> <p>Since the new total = 60 liters, the amount 20 liters = <math>60 - 20 = 40</math> liters.</p>
24	<b>Ans:</b>
25	<b>Ans: 31</b>

	<b>Solution:</b> Let the third number be 100. Then, 1 <sup>st</sup> number = 140 2 <sup>nd</sup> number = 160 % 1 <sup>st</sup> to the 2 <sup>nd</sup> number = $(20/160) \times 100 = 12.5$
26	<b>Ans: 20</b> <b>Solution:</b> $330 - 275 = 55$ $55/275 \times 100 = 20$
27	<b>Ans: 10000</b> <b>Solution:</b> let total be x $x - x/5 - 2x/5 - 18x/125 = 5760$ $72x/125 = 5760$ $x = 10000$
28	<b>Ans: 20%</b> <b>Solution:</b> $4/20 \times 100$
29	<b>Ans:</b>
30	<b>Ans: 30</b> <b>Solution:</b> $52 + 18 = 70$ $100 - 70 = 30$ $30/100 \times 100 = 3\%$
32	<b>Ans: c</b> <b>Solution:</b> the population will be $100000 \times 102/100 \times 103/100 \times 105/100 = 110313$
33	<b>Ans: b</b> <b>Solution:</b> As per question : $7\% = 84$ marks So $100\% = 84/7 \times 100 = 1200$
34	<b>Ans: b</b> <b>Solution:</b> Total marks obtained = $450 \times 54/100 = 243$ And in B = $150 \times 56/100 = 84$ So in C = $243 - 73 - 84 = 86$
35	<b>Ans: d</b> <b>Solution:</b> passed students = $800 \times 75/100 + 600 \times 80/100 = 1080$ So failed % = $1400 - 1080/1400 \times 100 = 22.86\%$
36	<b>Ans:</b> <b>Solution:</b> Let c's salary be 100, so b's is 25 and a's is 10 So its 10 % of C's salary
37	<b>Ans: d</b> <b>Solution:</b> Let the number of people be x who has been asked for the donations. People already solicited = 60% of x = $0.6x$ Remaining people = 40% of x = $0.4x$ Amount collected from the people solicited, = $600 \times 0.6x = 360x$ $360x = 75\%$ of the amount collected. Remaining amount = $25\% = 120x$ Thus, Average donations from remaining people, = $120x / 0.4x = 300$ .

