RATIO AND PROPORTION

1. In a school, 10% of the boys are same in number as 1/5th of the girls. What is the ratio of boys to girls in that school?

(a) 1:2 (b) 3:4 (c) 3:2 (d) 2:1 (e) NOT

2. A sum of money is distributed among A, B and C such that A get double of C and B get average of A and B. find the ratio in which the money is distributed?

(a) 1:1:7 (b) 2:2:1 (c) 1:1:2 (d) 1:2:3 (e) NOT

3. Divide 27 into two parts so that 5 time the first and 11 times the second together equal to 195. Then ratio of the first and second part is:

(a) 10:17 (b) 17:10 (c) 10:13 (d) 1:2 (e) 5:7

4. The speed of a boat in still water is 500% more than the speed of the current. What is the respective ratio between the speed of boat downstream and speed of boat upstream?

(a) 4:9 (b) 5:7 (c) 5:6 (d) 11:2 (e) 7:5

5. In a class of 75 students, one-fifth of the total number of girls and three- fifth of total number of boys join a cricket club. If the total number of boys joining the club is 27. What is the respective ratio of the total number of boys to the total number of girls joining the club?

(a) 9:4 (b) 9:2 (c) 2:27 (d) 5:2 (e) NOT

6. In a class of 125, 20% students can dance. 2/5 of the total students can sing and 2/5 of the remaining students are good at sports. What is the respective ratio of students who can dance to students who are good at sport?

(a) 3:4 (b) 9:8 (c) 5:2 (d) 1:8 (e) 5:4

7. The respective ratio of the number of boys to girls studying in school is 25:29. The total number of students studying in the school is 270. If 15 boys and 15 girls take admission in the school. What will be the new respective ratio of the boys and girls studying in the school?

(a) 2:1 (b) 7:8 (c) 5:8 (d) 2:7 (e) 12:7

8. Two numbers are in the ratio of 3:5.if 9 is subtracted from each then they become 12:23. Find the numbers?

(a) 23,46 (b) 33,55 (c) 32,16 (d) 13, 28 (e) 14,28

9. The income of A, B and C are in the ratio of 7:9:12 and their spending are in the ratio 8:9:15. If A saves 1/4th of his income, then the saving of A, B and C are in the ratio of :

(a) 1:2:3 (b) 3:4:7 (c) 7:9:2 (d)data inadequate (e)NOT

10. The ratio of the number of boys and girls in a college is 5:6. If the percentage increase in the number of boys and girls are 25% and 30 % respectively, then find the new ratio?

(a) 120:131 (b) 125:156 (c) 123:121 (d) cannot be determined (e) NOT

11. In a bag, there are coins of 25p, 10p and 5p in the ratio of 1:2:3. If there is Rs. 30 in all, how many 5p coins are there?

(a) 750 (b) 100 (c) 150 (d) 200 (e) 450

12. Seats for mathematics, physics and English in a school are in the ratio 6:7:9. There is proposal to increase these seats by 40%, 30% and 60% respectively. What will be the ratio of increased seats?
(a) 13:45:34 (b) 13:34:45 (c) 84:91:144 (d) 15:26:31 (e) NOT

13. An amount of Rs. 2430 is divided among P, Q and R such that if their shares be reduced by Rs. 5, Rs. 10 and Rs. 15 respectively the remainders will be in the ratio of 3:4:5. Then Q's share was:
(a) 200 (b) 800 (c) 450 (d) 1200 (e) 1000

14. The ratio of the incomes of A and B is 5:4 and the ratio of their expenditure is 3:2. If at the end of the year, each saves 1600, then the income of B is :
(a) 1600 (b) 2400 (c) 3200 (d) 2000 (e) NOT

15. The side of triangles are in the ratio ½:1/3:1/4 and its perimeter is 104 cm. the length of the longest side is:
(a) 32 cm (b) 20 cm (c) 54 cm (d) 56 cm (e) 48 cm

SOLUTION AND EXPLANATION OF RATIO AND PROPORTION

1. (d)
10% of boys = 1/5 of girls
Boys/girls = 1/5: 1/10/100 = 2:1

2.(b)
According to the question,
A= 2C and B =A+B/2,
A: B: C = A: A: A/2 = 1:1:1/2 = 2:2:1.

3.(b)
Let the first number be 27-x and second number be x,
5(27-x) +11x = 195,
Then x = 10, so the ratio is 17/10.

4.(e)
Let speed of boat in still water is u and speed of current is v
Then u =6v
Ratio= speed of downstream: speed of upstream = u+v: u-v = 7:5

5.(b)
Given, 3/5 of total boys joined the club = 27, so total boys = 45,
Total girls = 75-45 = 30,
Girls joining club = 1/5 * 30 = 6.
Ratio is = 27/6 = 9/2.

6.(e)

Ratio is = 5/4.

7.(b)
Boys/girls = 25/29, boys + girls = 270,
Then girls = 145 and boys = 125,
After admission of 15 boys and 5 girls new ratio = 140/160 = 7/8.

8.(b)
Let the numbers be x and y,
Then numbers are 33, 55.

9.(e)
Income of A, B & C are in ratio of 7:9:12 and their spending in the ratio of 8:9:15.
For A, 7x- 8y =7/4x, then x= 32y/21, savings of A, B & C is 7/4x: 9(x-y): 12x-15y
On putting the value of x = 32y/21 in the ratio we get ratio as 56:99:69.

10.(b)
The new ratio between boys and girls are

11.(c)
Let the total number of coins be x. then,
60x/100 = Rs. 30
Then x= 50,
5p coins = 3*50 = 150.

12.(c)
The new ratio is = 6 * 140/100: 7* 130/100: 9 * 160/100= 84:91:144.

13.(b)
Total reduced amount = 2430 – (5+10+15) = 2400.
Q's share =

14.(c)
Let the income be x and expenditure be y,
Then, 5x-3y = 1600
And 4x- 2y = 1600
On solving both equation, we get x = 800, income of B = 4x = 3200.

15.(e)
Let the side of triangle be a, b, and c so a+b+c = 104cm,
Also a: b: c = ½:1/3:1/4.
x/2 +x/3 + x/4 = 104 cm
x = 96
Longest side is x/2 = 48 cm.

PROBLEMS ON PERCENTAGES

1. An entry fee in a fair is Re. 1. Later, this was increased by 20% which decreases the sale by 25%. The percentage decrease in the number of visitors is?
(a) 35% (b) 62.5% (c) 45% (d) 37.5 (e) NOT

2. A's average expenditure is 140% of sum of average savings of B and C both, if total saving of C is double of B and A's average income to average saving ratio is 5/3 and saving of A is 36000 in a year, then what is total saving of B?
(a) 1000 (b) 1200 (c) 1500 (d) 2000 (e) NOT

3. Peter earned 50% more than sum of Ravi and Rajesh whereas Rajesh earnings are one third of that of peter. What is the percentage earning of Ravi more than Rajesh?
(a) 10% (b) 15% (c) 50% (d) 0% (e) 100%

4. In a fraction the numerator is 5 more than denominator and the sum of two numbers is 20% more than difference of two numbers. By what percentage numerator is greater than denominator?
(a) 200% (b) 500% (c) 1100% (d) 1000% (e) 100%

5. Two peoples P and Q invest their savings in the ratio of 4/9, by what percent P's investment is less than the sum of their saving?
(a) 25% (b) 45% (c) 35% (d) data inadequate (e) NOT

6. In year 2013, the number of students in school A was half that of in school B. In the year 2014, the number of students was more than that in previous year by 20% in each of the schools. In the year 2015, the number of students in school A was one-fourth of the sum of those in schools A and B together in the year 2014. The number of students in the school A in the year 2015 was what percent less than that in the year 2014?
(a) 20% (b) 10% (c) 25% (d) 46% (e) 0%

7. The population of a town grows at the rate of 20% in every 6 years. In how many years it will double itself?
(a) 5 (b) 6 (c) 4 (d) data inadequate (e) NOT

8. A man invests equal sums in 6% and 8% stock, and gets 10% for his money. The 6% stock is at Rs. 60. What is the sum in which he purchased the 8% stock?
(a) 80 (b) 50 (c) 60 (d) 70 (e) None

9. In an election, A wins over B by a margin of 280 votes, which is 14% of total number of votes. If 1% votes are invalid, how many votes were valid?
(a) 2000 (b) 1890 (c) 1450 (d) 1790 (e) 1980

10. A uniform cylindrical tank is initially filled to 40 % of its capacity. The radius of the base of the tank is increased by 15%. By what percentage (approx.) of the height of the tank does the level of water fall?

(a) 5% (b) 10% (c) data inadequate (d) 9% (e) NOT

11. A gave 10% salary to mother. Out of remaining half in insurance and PPF in the ratio 5: 7. If total of what he gave to mother and what invested in PPF is 10,400. Find A's salary?
(a) 28000 (b) 30000 (c) 28690 (d) 30500 (e) NOT

12. Mohan invests 21% of her monthly salary, i.e., Rs.9996 in Fixed Deposits. Later he invests 27% of her monthly salary on Life Insurance Policies; also he invests another 9% of his monthly income on Mutual Funds. What is the total annual amount invested by Mohan?
(a) 22500 (b) 22372 (c) 22547 (d) 21000 (e) 24000

13. Meera's English test consist of 75 questions from three sections- i.e. A, B and C. 20 questions from section A, 15 questions from section B and 40 question from section C. Although, she answered 80% of section A, 60% of section B and45% of section C correctly. She did not pass the test because she got less than 60% of the total marks. How many more questions she would have to answer correctly to earn 60% of the marks which is passing grade?
(a) 4 (b) 1 (c) 5 (d) 2 (e) NOT

14. 450 chocolates were distributed equally among children in such a way that the number of chocolates received by each child is 20% of that of total number of children. How many chocolates did each child receive if 10% of chocolates are taken back by teacher?
(a) 10 (b) 45 (c) 15 (d) 5 (e) 9

15. In 2014, the population of village X was 20% more than the population of village Y. the population of X in 2015 increased by 10% as compared to the previous year. If the population of village X in 2015 was 5610. What was the population of village Y in 2014?
(a) 4000 (b) 5008 (c) 4300 (d) 4250 (e) NOT

SOLUTION AND EXPLANATION OF PROBLEMS ON PERCENTAGES

1. (d)
Let total sale be 100 units, original visitor be 100.
Reduced visitor = 100*100/120, % decrease in number of visitor = 100-75/1.2 = 37.5%.

2. (d)
Let Ea be average expenditure of A and Sb & Sc be total savings of B & C.
Then Ea/12 = 140% * (Sb/12 +Sc/12)
Also Sb =Sc/2, and Ia/Sa = 5/3.
On solving we get Sb = 2000.

3. (e)
Peter = 150/100 * (Ravi + Rajesh), Rajesh =1/3 * peter.
On solving we get earnings of Ravi is same as Rajesh. I.e. 100%.

4. (c)
Let the fraction be X/Y.
X = Y+5, X + Y = 120% of (X-Y).
On solving we get X= 5.5 & Y= 0.5, percentage = 1100%

5. (d)
Ratio between savings of P and Q is 4:9, more data is need to answer the question, so data inadequate

6. (c)
In 2013, A = B/2
In 2014, A & B becomes 1.2 times the value in 2013.
In 2015 A = ¼ *(A+ B) in 2014.
So A = 9/20 B
%= (3/5-9/20)*100*5/3

7. (c)
Let the population be P and x be number of years
P (1+20/100) ^x= 2P
1.2^x=2
Therefore x is approximately = 2

8. (c)
Let the investment be x
6x/60+8x/y= .1*2x
Then y = 80.

9. (e)
Valid votes = 280*100*90/ (2000*100)= 1980.

10. (b)
The tank is filled to 40% of capacity, so let height of the tank be h= 0.4h.
Also radius increases to 15%, new radius is r= 1.15r.
$\pi * r^2 * (0.4h) = \pi * (1.15r)^2 * h'$
$h' = \frac{0.4}{1.3225}$
% height of tank is $\left(0.4 - \frac{0.4}{1.3225}\right) * 100 \cong 10\%$

11. (c)
A's salary = 10400*400/145= 28690(approx.)

12. (b)
Mohan monthly salary is (9996*100)/21 = 47600,
Total annual amount invested by Mohan is$(21 + 27 + 9)\% * 47600 = RS.27132.$

13. (d)

Let x be the mark that Meera get on attempting the question correctly.
$(0.8 * 20 + 0.6 * 15 + .45 * 40)x = 43x$
Since 43x < 0.6*75x
There Meera should attempt 2 more questions to pass the test

14. (e)
Total distributed chocolate is 0.9 * 450 = 405
Let no. of children be x
405/x=20%x
Then, x=45

15. (d)
The population of village Y in 2014 = $\frac{5610*100*100}{110*120} = 4250$

TIME & WORK

Q 1) P, Q and R work together for a particular time to do a certain amount of work.R needs one hour less than P to complete the work. Working together, they require 30 minutes to complete 50% of the job. The work also gets completed if P &Q start working together and P leaves after 1 hour and Q works for a further 3 hours. How much work does R do per hour?

a) 16.67% b) 50% c) 66.67% d) 25%

Q 2) The total number of men, women & children working in a factory is 18. They earn Rs 4000 in a day. If the sum of the wages of all men, all women and all women and all children is in the ratio of 18:10:12 and if the wages of an individual man, woman and the child is in the ratio 6:5:3, then how much a woman earn in a day?

a) Rs 400 b) Rs 250 c) Rs 150 d) Rs 120

Q 3) Two women Radhika&Usha are working together on an embroidery design. If Usha worked alone, she would need eight hours more to complete the design than if they both worked together. Now if Radhika worked alone, it would need 4.5 hours more to complete the design than they both working together. What time would it take Radhika alone to complete the design?

a) 10.5 hours b) 12.5 hours c) 14.5 hours d) 18.5 hours

Q 4) 'A' takes 4 days to complete 1/3rd of a job. 'B' takes 3 days to complete 1/6th of the same work and 'C' takes 5 days to complete half of the job. If all of them work together for 3 days and 'A' & 'C' quit, how long will it take for 'B' tocomplete the remaining work done.

a) 6 days b) 8.1 days c) 5.1 days d) 7 days

Q 5) At Call tech solutions Pvt Ltd. There are some engineering students employed as graduate engineer trainee, belonging to two eminent institutions of india.one group belong to MIT and another to NIT. Each student of MIT works for 10 hours a day till 60 days and each student of NIT works for 8 hours till 80 days on the two same projects. The ratio of number of students of MIT and that of NIT is 4:5 respectively. Students of which institution is slower in work and by how much?

a) Each student of MIT is 20% less efficient than that of NIT
b) Each student of NIT is 33.33% less efficient than that of MIT
c) Each student of NIT is 25% less efficient than that of MIT
d) Each student of MIT is 33.33% less efficient than that of NIT.

Q 6) Consider three friends A, B and C who work at differing speeds. When the slowest two work together they take n days to finish a task. When the quickest two work together they take m days to finish a task. One of them, if he worked alone would take thrice as much time as it would take when all three work together. How much time would it take if all three worked together?

a) 3mn/2(m+n) b) 2mn/(m+n) c) 4mn/3(m+n) d) 5mn/(3(m+n)

Q 7) Number of units of a good that can be produced by a factory is directly proportional to the square of the number of workers, square root of the number of machines and to the number of hours put in. The factory

produces 200 goods when 4 people work for 8 hours each with 4 machines. When 3 people work for 12 hours each with 9 machines, how many goods will be produced?

a) K= 25/32 b) K= 100/163 c) K= 25/256 d) K= 16/29

Q 8) A can complete a task 4 hours lesser time than B takes to complete the same. If A and B together can complete the task in 288 minutes, how long does B alone take to complete the task?

a) 1 hr b) 2 hr c) 3 hr d) 12 hrs

Q 9) A can do ¼ th of a work in 10 days, B can do 40% of the same work in 40 days and C can do 1/3rd of the work in 13 days. Who will complete the work first?

a) A b) B c) C d) Both A & C

Q 10) 5 men start working to complete a work in 15 days. After 5 days, 10 women are accompanied by them to complete the work in next 5 days. If the work is to be done by women only, when could the work e over, if 10 women have started it?

a) 10 days b) 18 days c) 15 days d) 12 days

SOLUTION AND EXPLANATION OF TIME & WORK

1). b) 0.5(P+Q+R) = 50% of the work.

Means –: P, Q & R Can do the full work in 1 hour.

Thus, (P+Q+R) = 100%

From this point it better to solve through options. Option c) gives the correct answer based on the following thought process.

If x= 50% of work per hour, it means R takes 2 hours to complete the work. Consequently, P would take 3 hours and hence do 33.33% of work per hour.

2). b) Ratio of number of men, women & children = 18/6 : 10/5 : 12/3 = 3x : 2x : 4x

3x + 2x + 4x = 18 ; x=2

Therefore, number of women = 4

Share of all women = (10/40)* 4000 = Rs 1000 (since 18 + 10 + 12 = 40)

So share of each woman = 1000/4 Rs 250

3). a) Let 'x' hrs be required to complete the work together.

Then, 1/(x+4.5) + 1/(x+80) = 1/x. check the options to see which one fits the equation and we see that option a) 10.5 hours fits into it.

4). c) let the total work be = 60 units
so A's rate of doing work = 5 units/day
B's rate of doing work = (10/3) units/day
Similarly C's rate of doing work = 6 units/day
So sum total of their one day's work is = 5 + 10/3 + 6 = 43/3
So in 3 days 43 units of work was done and work left is = 60 – 43 = 17 units
To complete this remaining work it took B = (17 * 3)/10 = 5.1 days

5). c) MIT NIT
4 * 10* 60 * E1 = 5 * 8 * 80 * E2
E1/E2 = 4/3
Where E1 & E2 are the respective working efficiencies per hour .
So ans is Each engineer from NIT is 25% less efficient than each engineer from MIT.

6) c) Let A < B < C in terms of efficiency.

7) a) G α No of workers2
G α No.ofMachines————————————√
G α No of hours 200 α 42×4√×8
200 α 16 x 2 x 8
200 α 256
200 = k x 256
K=200/256 : K=25/32
Correct Answer: K=25/32

8) d) Let time taken by A be 'a' hours and time taken by B be 'a+4' hours
Then A does 1a of the work in an hour. B does 1a+4 of the work in an hour. Together they take 288 minutes to finish the job, 288 minutes = 28860=245 hours. Therefore, both A and B together complete 524 every hour.
1a+1a+4=524
2a+4a(a+4)=524
We get, 48a + 96 = 5(a2 + 4a)
=> 5a2 - 28a - 96 = 0
=> 5a2 - 40a + 12a - 96 = 0
5a (a - 8) + 12(a - 8) = 0
(5a + 12)(a - 8) = 0 .Therefore, Since a cannot be negative, a = 8 hours.
Hence, a + 4 = 12 hours. Therefore, Time taken by B to complete the work on his own is 12 hours.
Correct Answer: 12 hrs

9) c)

Let us assume the amount of work be 60 units

Now 1/4rth of a work = 15 units which is completed by A in 10 days. So A's rate of work A= (3/2) units/day

B completed 40% of work (40% of 60 units=24 units) in 40 days. So B's rate of doing work B= (3/5) units/day

Similarly C does 1/3rd of work (i.e. 20 units) in 13 days. So C's rate of doing work, C=(20/13) units/ days

finding out A complete whole work in (60*2)/3 = **40 days**

B complete whole 60 units of work in (60*5)/3=**100 days**

& C complete the whole work in (60*13)20= **39 days**

So from the above we can conclude that C complete faster than the other two hence option c) C is the answer

10) c) answer is

Let us take amount of work be 60 units

So 5 men does 40 unit/day work

So if we assume rate of doing work of 10 women be x units/day

Then according to data given we get the equation as

10*4 + 5x = 60 which gives x=4

So time by 10 women to complete the whole work (ie 60 units) is = 60/4 = 15 days Ans

PROFIT & LOSS

1. A man sold an article for Rs. 6800 and incurred a loss. Had he sold the article for Rs. 7600, his gain would have been equal to half of the amount of the loss that he incurred. At what price should he sell the article to have 20 % profit?
(a) Rs. 8000 (b) Rs. 8500 (c) Rs. 8800 (d) Rs. 9000 (e) Rs.7500

2. The cost price of two cars is same. One is sold at a profit of 20% and the other for Rs. 360 more than the first one. If the overall profit earned after selling the tables is 22%, then what is the cost price of each chair?
(a) Rs.10,00,000 (b) Rs. 15,00,000 (c) Rs. 9,00,000 (d) cannot be determined (e) NOT

3. If a shopkeeper marks the price of goods 50% more than their cost price and allows a discount of 40%, what is his gain or loss percent?

(a) 10 % loss (b) 5% profit (c) 15 % loss (d) 5 % loss (e) NOT

4. A retailer brought 40 kg of wheat at a discount of 15 % on the market price. Besides, he was given 6 kg of wheat free of cost, by the retailer for purchasing bulk quantity. If retailer sold the entire quantity of rice at the marked price to his customers, then approximately what was his profit percent?
(a) 50% (b) 25% (c) 18% (d) 35% (e) NOT

5. A shopkeeper bought 30 kg of wheat at the rate of Rs. 45 per kg. He sold 30 % of total quantity at the rate of Rs. 50 per kg. Approximately, at what price per kg should he sell the remaining quantity to make 28 % profit?
(a) Rs.69 per kg (b) Rs. 40 per kg (c) Rs.60.85 per kg (d) Rs. 54.70 per kg (e) NOT

6. A mobile phone and a tablet were sold at a profit of 10% and at a loss of 6 % respectively. If the cost price of the mobile is 1.5 times of the tablet, what is the overall profit percentage earned by selling both the articles?
(a) 4% (b) 1% (c) 5% (d) 8% (e) 2%

7. Prateek sold a music system to karthik at 20 % profit and karthik sold it to sweta at 40 % profit. If sweta paid Rs. 10500 for the music system, what amount did Prateek pay for the same?
(a) 6250 (b) 5000 (c) 8000 (d) 7500 (e) 9000

8. A shopkeeper makes a default of 5% on purchasing the goods and again makes a default of 5 % on selling the goods then find the total profit percent?
(a) 10.25% (b) 15.5% (c) 12% (d) 10.5% (e) NOT

9. On selling a book in Rs. 60, publisher get 1/11 part of its cost as loss, then find cost price of the book?
(a) 55 (b) 66 (c) 61 (d) 77 (e) 68

10. The profit after selling a pair of shirts for Rs. 863 is same as loss incurred after selling the same pair of shirts for Rs. 633. What is the cost price of the pair?
(a) 748 (b) 568 (c) 650 (d) data inadequate (e) 550

11. A shopkeeper sold his article with 10 % profit and used the weights which are 20 % less than the real weights. Then find his total profit %?
(a) 45.5% (b) 37.5% (c) 25% (d) data inadequate (e) NOT

12. Ram sold an article with 2.5% loss. If he sold it 100/- more then Ram get 7.5% profit. What will be the selling price of article if Ram wants to earn 12.5% profit?
(a)1200 (b) 1000 (c) 1205 (d) 1125 (e) NOT

13. Rajesh purchase some card board of Rs. 14000, paid Rs. 300 for loading & paid Rs. 1300 as wages & prepared 350 boxes. If he sold boxes @ Rs. 55 per box, then Find his profit %?
(a) 23.4% (b) 10% (c) 13% (d) 18% (e)21.3%

14. A shopkeeper allows 23 % commission on his advertised price and still makes a profit of 10%. If he gains 56/- on one item, his advertised price of the item in Rs. Is?
(a) Rs.450 (b) Rs. 623 (c) Rs. 639 (d) cannot be determined (e) NOT

15. The cost of an apple is twice that of a bananas and the cost of a banana is 25% less than that of a guava. If the cost of each type of fruit increase by 10 %, then the percentage increase in cost of 4 bananas, 2 apples and 3 guavas is :
(a) 20% (b) 10% (c) data inadequate (d) either (a) or (b) (e) 4%

SOLUTION AND EXPLANATION OF PROFIT & LOSS

Solution and explanation of Profit and loss:

1. (c)

Let cost price of an article is cp. Also selling price = 7600.

7600-cp = (cp-6800)/2=> cp = 22000/3.
Then selling price of article to have 20% profit = 120/100 * cp=120/100* 22000/3
Selling price= 8800 rupees.

2. (c)

Let the SP of first car be SP1 and second car be SP2, then
SP1= 120/100 * CP
SP2 = 360 +SP1 (120/100*CP) = 1806/5 CP
Total profit= (total SP- total CP)/total CP * 100
= (SP1+SP2-2CP)/2CP*100= (1812/5-2) CP/2CP *100
Then on solving CP = Rs. 9, 00,000.

3. (a)

Let CP be 100
Then Marked price= 150
After a discount of 40%, SP = 90
Loss percent = (100-90)/100*100=10%.

4. (d)

Let the cost price of wheat per kg be 100.
At a discount of 15 % the consumer pay (85 * 40) = 3400 rupees.
If retailer has not allowed discount then selling price of 40 + 6 kg wheat = 46 * 100 = 4600 rupees.
% profit = 4600-3400/3400 * 100 = 1200/3400 * 100= 35 %(approx.)

5. (c)

Initial total price= 30 * 45 = Rs. 1350
To have 28 % profit, selling price of 30 kg is Rs. 1728.
Price of 70% quantity is (1728-450)/ 70% * 30=Rs. 60.85.

6. (a)

Cost price of mobile = 1.5 of cost price of tablet

SP of mobile = 110/100 * CP of mobile

SP of tablet = 94/100 * CP of Tablet.

Total CP = 2.5 of CP of tablet

Total SP = 2.59 of CP of tablet

% profit = 4%.

7. (a)

Amount payed by Prateek =

8. (a)

Total profit = % Default 1+ % Default 2 + %Default 1 * % Default 2

= 5 + 5+ 25/100 = 10.25%

9. (b)

CP-SP = LOSS

CP – 60 = CP/11

CP = 66.

10. (a)

According to the question,

863-CP = CP-633

CP = (863 +633)/2

=1496/2 = 748.

11. (b)

12. (d)

According to the question,

97.5% of CP +100 = 107.5% of CP
10% of CP=100. CP=1000
After 12.5% profit, CP=112.5/100 * 1000
CP = 1125

13. (a)
Total selling price = 350 * 55 = 19250
Total cost price= 14000 + 300 +1300 =15600
Rajesh profit % = 19250-15600/15600 *100 = 23.4 %

14. (c)
Commission= 23%
Profit = 56/-
Profit % = 10%
Let advertised price of the item be x
SP = x-23
CP = 100/110 *SP
Also SP-CP = 56
10/110 SP = 56
SP = 56*11
So, x = 616+23 = 639.

15. (b)
Let the price of guava be 100.
Then price of banana = 75% of guava = 75
And price of apple = 150.
After 10 % increase in all prices the new prices are
Guava = 110, banana = 82.5 and apple = 165.
% increase in cost of 4 bananas, 2 apples and 3 guavas = 990-900/900 * 100 = 10%