General Maths Grade : 9th Arts

 Exercise ----1.4

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Q: 1 Find the ratio of 6 rupees each to 72 rupees per dozen.

Solution: 6 :72 per dozen

72 rupees per dozen = 72/12 (1 dozen =12)

 =6

now 6:6

 1:1

Q :2 Find the ratio of RS.160 per meter to RS. 150 per meter.

Solution: Rs.160 : Rs. 150

 16 : 15 ans

Q: A square A has side 2cm and a square B has side 6cm. Find the ratio of:

1. The length of the side of the square A to the length of the side of the square B.

Solution: square A : square B

 2cm :6cm

 1 :3

1. The perimeter of the square A to the perimeter of the square B.

 solution: Perimeter of a square = one side x4 or ( side+side+side+side)

 Perimeter of square A :Perimeter of square B

 4X2 : 4X6

 8 : 24

 1 : 3

1. The area of square A to the area of the square B

Solution: Area of a square = side xside

 Area of square A = 2X2 =4cm

 Area of square B = 6X6 =36

 Now 4cm : 36cm

 1 : 9

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Q If a :b =2:3 , find the ratio 6a : 2b

Solution: 6a = 6(2) = 12

 2b = 2(3) = 6

Now 12 : 6

 2 : 1

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Q :3 Find the ratio of Rs. 72 for 24 to rupees 4 each.

 Solution : Ratio of 72 to 24 to rupees 4 each

 24 x4 =96

 now 72 : 96

 36 : 48

 18 : 24

 9 : 12

 3 : 4

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 UNIT NO.3 ( BUSINESS MATHEMATICS )

 Total exercise 3 (3.1,3.2,3.3 )

 Exercise 3.1 we need to find (i) SP (Sell price ) CP (Cost price ) and profit percentage

Mostly questions of exercise 3.1 can be solved using a formula

1. SP = CP (1+ profit %)
2. SP = CP (1- loss %)

Q:1 Find the SP,when

1. CP = Rs. 950, Profit = 10%

Solution : we know that SP = CP (1+ profit %)

 = 950 (1+10%)

 = 950 (1 +$\frac{10}{100}$ )

 = 950 (1 +0.1)

 = 950 (1.1)

 = Rs.1045 ans

(ii)CP =Rs. 1540 ,loss = 5%

 Solution : we know that SP = CP (1- loss %)

 = 1540 (1-5%)

 = 1540 (1- $\frac{5}{100}$ )

 = 1540 (1- 0.05 )

 = 1540 (0.95 )

 = Rs. 1463 ans

(vi) CP = Rs . 760 ,Loss = 4%

Solution : we know that SP = CP (1 – loss %)

 SP = 760 ( 1 – 4%)

 = 760 (1- $\frac{4}{100}$ )

 = 760 ( 1 – 0.04)

 = 760 (0.96)

 = Rs. 729 .6 ans

Q 2 : Haris purchased a car for Rs. 248000 and spent Rs.12000 on its denting and painting . He sold that at a profit of 5% . What did the customer pay to Haris

Solution : Cost price of a car = Rs. 248000

 denting and painting = 12000

 Total cost price = 248000 + 12000 = Rs.260000

 Profit = 5%

SP = ?

 we know that SP = CP (I + Profit %)

 = 260000 ( 1+ $\frac{5}{100}$ )

 = 260000 (1 + 0.05 )

 = 260000 (1.05)

 = Rs. 273000 ans

Q 3 : Find the CP, when

1. SP = Rs.672 , Profit = 5%

Solution we know that SP = CP (1 + Profit %)

 672 = CP ( 1 + 5/100)

 672 =CP (1 +0.05 )

 672 = CP ( 1.05 )

 $\frac{672}{1.05}$ = CP

 Rs.640 = CP

 (IV) SP = Rs. 2640 , loss = 12%

 Solution : we know that SP = CP (1 – Loss %)

 2640 = CP (1 – 12/100)

 2640 = CP (1- 0.12)

 2640 = CP(0.88 )

 $\frac{2640}{0.88}$ = CP

 Rs.3000 = CP

Q: 4 A shop –keeper gains a profit of 7% by selling a dinner set for Rs. 3852 .If he sells it for Rs.4050,find his profit percentage.

Solution :Given data SP = Rs . 3852

 Profit = 7%

 CP =?

we know that SP =CP (1+ profit %)

 3852 = CP (1+7%)

 3852 = CP (1+7/100)

 3852 = CP (1 + 0.07)

 3852 = CP (1.07)

 3852/1.07 = CP

 3600 = CP

 Now again using a formula SP = CP (1+profit %)

 4050 = 3600 (1+profit %)

 4050/3600 = 1+ profit %

 1.125 = 1 + profit %

 1.125-1 = Profit %

 0.125 = Profit %

 0.125 = Profit/100 (as % = 1/100)

 0.125x100 = Profit

 12.5 = Profit

 12.5 % = Profit %

Q : 7 A man sold an almirah at a Profit of 7 $\frac{1}{2}$ % ,had he sold it for Rs209,he would have lost 2% .For how much the man purchased it ?

 Solution : Given data

 SP = 209

 Loss = 2 %

 CP = ?

 we know that SP = CP (1 – loss %)

 209 = CP (1 – 2%)

 209 = CP (1 – 2/100)

 209 = CP (1 – 0.02)

 209 = CP (0.98)

 209/0.98 = CP

 213.26 = CP

 213 = CP

DISCOUNT: in simple terms discount is an allowance or concession in price .

Discount=Marked price-Sale price OR List price- Sale price

Discount% = (Discount/Marked price) x100

Sale price =Marked price (100-Discount %/100)

Marked price =100xsale price/100-Discount

 Exercise 3.2

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Q 1: Find the selling price when,

MP =RS.728, Discount =6%

Solution: we know that

 Sale Price =MP (1-Discount %)

 = 728(1-6%)

 = 728(1-6/100)

 = 728(100-6/100)

 = 728(94/100)

 =728(0.94)

 =684.32

(iii) MP =RS.395.75, Discount =8%

Solution: we know that

Sale price =MP (1-Discount %)

 = 395.75(1-8%)

 =395.75(1 -8/100)

 =395.75(100-8/100)

 = 395.75(92/100)

 = 395.75(0.92)

 = 364.09

Question 2: Find the marked price when,

1. SP =Rs.515.20,Discount =8%

 Solution: We know that SP =MP (1-Discount %)

 = MP (1-8/100)

 515.20 =MP (100-8/100)

 515.20 = MP (92/100)

 515.20 =MP (0.92)

 515.20 /0.92 =MP

 560 =MP

1. SP =RS.858, Discount =12%

 Solution: we know that

 SP =MP (1-Discount %)

 858 =MP (1-12/100)

858 = MP(100-12/100)

858 =MP (88/100)

858 =MP(.88)

858/.88 =MP

975 =MP

Question 4: The marked price of washing machine is Rs. 3640.Durning sale season it is sold for Rs.3367. What percent sale discount is being given.

Solution: MP Price of washing machine =3640

 SP of washing machine =3367

 Discount =?

We know that SP =MP (1-Discount %)

 3367 =3640(1-Discount%)

 3367/3640 = (1-x %) let Discount =X

0.925 =1 –X%

0.925 -1 =-X%

-0.075 = -X%

0.075 =X/100

0.075X100 = X

7.5 = X

So X =7.5%

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Question: A trader marks his goods in such a

 Exercise 3.3 its related to Partnership now what is Partnership ? An association of two or more Persons to carry on a business for the purpose of making profit is called partnership . now there are two kind of partnership (i) simple partnership (ii) compound partnership

When capital of partners are invested for the same length of time ,the partnership is called simple partnership . In such cases ,profit or loss is distributed in proportion to the amount of capital invested by each partner.

When the capital of partners whether equal or unequal are invested for different lengths of time , the partnership is called compound .In such cases profit or loss is distributed in accordance with the products of the capital and the periods of their investments .

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Q : 1 Distribute Rs.200,000 as a profit in a business regarding three persons,if there shares are in the ratio 3:2:5

 Solution : Total profit = 200,000

 let A,B ,C are three partners

Now ratio between A,B,C are = 3 :2:5

 sum of ratios = 3+2+5 = 10

now let A share in profit = 200,000 x $\frac{3}{10}$ = 60,000

 B share in profit = 200,000x $\frac{2}{10}$ = 40,000

 C share in profit = 200,000 x $\frac{5}{10}$ = 100,000

Q: 3 Distribute Rs. 720 as profit amongst three people . So that their shares are in the ratio 3: 4 :5

Solution : Total profit = 720

 let A,B,C be three shares

Now ratio between A ,B,C are = 3 :4 :5

 Sum of ratio = 3+4+5 = 12

 now A share in profit = 720 x $\frac{3}{12}$ = 180

 B share in profit = 720 x $\frac{4}{12 }$ = 240

 C share in profit = 720 x $\frac{5}{12}$ = 300

Q :4 Three persons invested an amount of Rs. 3,000,000 in a business with share ratio 2:3:7 . the earned a profit of Rs. 600,000. If they are interested to wind up their business, what amount every share holder would get?

Solution : Total Profit = 600,000

 let A ,B,C be the three persons

 Now given share among A,B,C are = 2:3:7

 Sum of shares = 2 +3+7 = 12

A share in Profit = 600,000 x $\frac{2}{12}$ = 100,000

B share in Profit = 600,000 x $\frac{3}{12}$ = 150,000

C share in Profit = 600,000 x $\frac{7}{12}$ = 350,000

Q :6 A sum of money is divided among three persons A ,B,and C in the ratio 10 :7 :5 . if B gets Rs.14 more then C . How much will A get and what is the total sum of money ?

Solution : let Total amount = x

 Ratio between A,B,C = 10 :7:5

 Sum of ratio = 10 +7+5 = 22

Now share of A = x$×\frac{10}{22}$ = $\frac{10x}{22}$

Share of B = x $×\frac{7}{22}$ = 7x/22

Share of C = X $×\frac{5}{22}$ = 5x/22

Now

 Share of B – Share of C = $\frac{7x}{22}$ - $\frac{5x}{22}$ = $\frac{2x}{22}$ = $\frac{x}{11}$

Since B gets 14 more then C = B – C = 14

Now B – C = $\frac{x}{11}$ also B- C =14 So

 $\frac{x}{11}$ = 14

 $\left(x\right)$ = 11x14 = 154

 So Total Amount = 154

Now A share = $\frac{10 (154)}{22 }$ = 70

Note remaining parts of Exercise 3.1 ,3.2 and 3.3 will be a home work .