Grade 7th

Comparing Quantities

Q1) In a class of 50 children, 10% are taking part in dramatics. How many are taking part in dramatics? How many are not taking part?

Q2) A pudding is made of 400gm sugar, 200g of eggs, 800gm of flour. What percent of sugar is present in the whole pudding?

Q3)Apple Vendor says that 20% of his apples are rotten. He found that 32 apples are in good condition. How many apples he had in total?

Q4) Marks obtained in exam is increased from 70 to 85. Find percent of increase.

Q5) A map is given with a scale of 2cm = 1000km. What is the actual distance between the two places in kms, if the distance in map is 2.5 cm?

Q6) A number is first increased by 20% and then decreased by 20%. Find the percent increase or decrease on whole.

Q7) Meena sold two fans at ₹ 1000 each, on one she made profit of 20%. And on other she had loss of 10%. Find the loss or profit percent on total transaction.

Q8) What sum of money lent out at 5% for 3yrs will produce the same interest as ₹ 900 lent out at 4% for 5years?

Solutions

CBSE grade 7th Comparing Quantities

Q1) In a class of 50 children, 10% are taking part in dramatics. How many are taking part in Dramatics? How many are not taking part?

Sol.1) Number of students in class = 50

10% are participating

Number of students participating = $\frac{10\times50}{100}$ = 5

Number of students not participating = 50 - 5 = 45

Q2) A pudding is made of 400gm sugar, 200g of eggs, 800gm of flour. What percent of sugar is present in the whole pudding?

Sol.2) Weight of sugar = 400gm

Weight of egg = 200gm

Weight of flour = 800gm

Total weight = 200 + 400 + 800 = 1400gm

Percentage of sugar in 1400gm = P = $\frac{100A}{N}$ = $\frac{100\times400}{1400}$ = 28.6%

Q3)Apple Vendor says that 20% of his apples are rotten. He found that 32 apples are in good condition. How many apples he had in total?

Sol.3) 20% of apples are rotten

∴ 80% of apples are in good condition which is 32

Total Number of apples = $\frac{100A}{P}$ = $\frac{100\times32}{80}$ = 40

Total number of apples = 40

Q4) Marks obtained in exam is increased from 70 to 85. Find percent of increase.

Sol.4) Change in marks = 85-70 =15

Original Marks = 70

Increase percent = $\frac{15}{70}$ x 100 = 21.42%

Q5) A map is given with a scale of 2cm = 1000km. What is the actual distance between the two places in kms, if the distance in map is 2.5 cm?

Sol.5) Let actual distance = x

2:1000 = 2.5 : x

$\frac{2}{1000} = \frac{2.5}{x}$

$2x = 2.5 \times 1000$

$x = \frac{2500}{2} = 1250$

2.5cm on map will be equal to 1250km actually.

Q6) A number is first increased by 20% and then decreased by 20%. Find the percent increase or decrease on whole.

Sol.6) If original number = 100

Amount of change = $\frac{percent\ increase \times original\ amount}{100}$

First number is increased by 20% therefore amount change = 20

Increased number = $100 + 20 = 120$

Next it is decreased by 20%

Original amount =120

Amount of change = $\frac{percent\ decrease \times original\ amount}{100}$

Amount change = 20 x120/100 = 24

Decreased number = original number – amount change

Decreased number = 120 -24 = 96

On whole

Original number =100

Decreased amount = 96

Amount change = 4

Percentage decrease = $\frac{amount\ of\ change}{original\ amount}$ **x** 100

=$\frac{4}{100} \times 100$ = 4%

Q7) Meena sold two fans at ₹ 1000 each, on one she made profit of 20%. And on other she had loss of 10%. Find the loss or profit percent on total transaction.

Sol.7) **For first fan**

SP_1 = 1000

P% = 20

$CP_1 = \frac{100}{100+20} \times SP_1$

$\frac{100}{120} \times 1000 = 833$

For second fan

$SP_2 = 1000$

L% = 10

$CP_2 = \frac{100}{100-10} \times SP_2$

$\frac{100}{90} \times 1000 = 1111$

Total Transaction

$SP_T = SP_1 + SP_2 = 1000 + 1000 = 2000$

$CP_T = CP_1 + CP_2 = 833 + 1111 = 1944$

Loss = 2000 – 1944 = 56

Loss % = $\frac{Loss}{CP}$x100

L% = $\frac{56}{1944}$ x 100 = 2.8%

Q8) What sum of money lent out at 5% for 3yrs will produce the same interest as ₹ 900 lent out at 4% for 5years?

Sol.8)

Part II

P= 900

R= 4

T = 5

SI = $\frac{900 \times 4 \times 5}{100}$ = 180

Part I

P =?

R = 5

T = 3

SI = 180

$P = \frac{SI \times 100}{RT}$

$= \frac{180 \times 100}{5 \times 3} = 1200$