PERCENT AND PERCENTAGE

PERIOD 5

SUBJECT : MATHEMATICS
CHAPTER NUMBER: 7
CHAPTER NAME : PERCENT AND PERCENTAGE

Learning outcome

1.The children will be able calculate simple *percentage* problems.

2. Determine the **percentage** of a given object presence within a group of 100 objects

Recapitulation

1. (i) A number is increased from 125 to 150; find the percentage increase.
    (ii) A number is decreased from 125 to 100; find the percentage decrease.
2. Find :
    (i) 45 is what percent of 54?
    (ii) 2.7 is what percent of 18?
3. In an examination, a candidate secured 125 marks and failed by 15 marks. If the pass percentage was 35 %; find the maximum marks.
4. A's income is 25% more than B's. Find, B's income is how much percent less than A's.

(i) Original value = 125. New value = 150

Increase = (150 − 125) = 25

Increase % = $\dfrac{25}{125}$ × 100 = 20%

(ii) Original number = 125, New value = 100,

Decrease = (125 − 100) = 25

Decrease % = $\dfrac{25}{125}$ × 100 = 20%

Let $45 = x$ percent of $54 = \dfrac{54 \times x}{100}$

$\Rightarrow x = \dfrac{45 \times 100}{54} = \dfrac{5 \times 100}{6}$

$= \dfrac{250}{3} = 83\dfrac{1}{3}\%$

$\therefore$ Reqd. percentage $= 83\dfrac{1}{3}\%$

(ii) Let $2.7 = x$ percent of $18 = \dfrac{18 \times x}{100}$

$\therefore x = \dfrac{2.7 \times 100}{18} = \dfrac{270}{18} = \dfrac{30}{2} = 15$

$\therefore$ Reqd. percentage $= 15\%$

Total marks secured = 125

Failed by 15 marks

$\therefore$ Pass marks = 125 + 15 = 140

Let Maximum marks = x

$\therefore \dfrac{x \times 35}{100} = 140$

$\Rightarrow \quad x = \dfrac{140 \times 100}{35} = 4 \times 100 = 400$

Hence maximum marks = 400

Let the original number = 100

Increased by 20%

∴ New number = 100 + 20 = 120

Decreased by 10% = $\dfrac{120 \times 10}{100} = 12$

∴ New number = 120 − 12 = 108

Overall change = 108 − 100 = 8

Reqd. percentage = $\dfrac{8}{100} \times 100 = 8\%$ (increase)

Home Assignment

Chapter-7