ODM EDUCATIONAL GROUP
Changing your Tomorrow

PERCENT AND PERCENTAGE

PERIOD 3

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

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Learning outcome

The children will be able calculate percentage problems.

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Previous knowledge:

1) In an examination, a candidate secured 125 marks and failed by 15 marks. If the pass percentage was 35 %; find the maximum marks.
2) The number 8,000 is first increased by 20% and then decreased by 20%. Find the resulting number.
3) The number 12,000 is first decreased by 25% and then increased by 25%. Find the resulting number.

Exercise-7(B)

Question 1.
A man bought a certain number of oranges ; out of which 13 percent were found rotten. He gave 75% of the remaining in charity and still has 522 oranges left. Find how many had he bought?

Exercise-7(B)

Suppose number of oranges bought = 100

Number of Rotten oranges

$$= \frac{13}{100} \times 100 = 13$$

Remaining oranges = 87

$$\text{Oranges given in charity} = \frac{75}{100} \times 87$$

$$= 3 \times \frac{87}{4} = \frac{261}{4}$$

$$\text{Net balance of oranges} = 87 - \frac{261}{4}$$

$$= \frac{348 - 261}{4} = \frac{87}{4}$$

If the balance is $\frac{87}{4}$, then number of oranges bought = 100

If the balance is 1 then number of oranges bought $= 100 \times \frac{4}{87}$

If the balance is 522 then number of oranges bought $= 100 \times \frac{4}{87} \times 522$

$$= \frac{100 \times 4 \times 522}{87} = 100 \times 4 \times 6 = 2400$$

Exercise-7(B)

Question 2.

5% pupil in a town died due to some diseases and 3% of the remaining left the town. If 2, 76, 450 pupil are still in the town; find the original number of pupil in the town.

Exercise-7(B)

Let original number of pupil in the town $= 100$

Number of pupil did due to desease

$$= \frac{5}{100} \times 100 = 5$$

Remaining pupil $= 100 - 5 = 95$

Number of pupil who left the town

$$= \frac{3}{100} \times 95 = \frac{3 \times 95}{100} = \frac{57}{20}$$

$$\text{Actual remaining pupil} = 95 - \frac{57}{20}$$

$$= \frac{1900 - 57}{20} = \frac{1843}{20}$$

If the remaining pupil in the town are $\frac{1843}{20}$,

then original number of pupil $= 100$

If the remaining pupil in the town is 1, then

$$\text{original number of pupil} = 100 \times \frac{20}{1843}$$

If the remaining pupil in the town are 276450, then original number of pupil

$$= 100 \times \frac{20}{1843} \times 276450 = \frac{100 \times 20 \times 276450}{1843}$$

$$= 100 \times 20 \times 150 = 300000$$

Exercise-7(B)

Question 3.
In a combined test in English and Physics; 36% candidates failed in English; 28% failed in Physics and 12% in both; find:
(i) the percentage of passed candidates
(ii) the total number of candidates appeared, if 208 candidates have failed.

Exercise-7(B)

Candidates failed only in English

$= 36\% - 12\% = 24\%$

Candidates failed only in Physics

$= 28\% - 12\% = 16\%$

Candidates failed in both subjects $= 12\%$

Total failed candidates $= 24\% + 16\% + 12\%$

$= 52\%$

(*i*) Percentage of passed candidates

$= 100\% - 52\% = 48\%$

(*ii*) If failed candidates are 52, then total candidates appeared $= 100$

If failed candidate is 1, then total candidates appeared $= \frac{100}{52}$

If failed candidates are 208, then total candidates appeared $= \frac{100}{52} \times 208$

$= 100 \times 4 = 400$

Exercise-7(B)

Question 5.
A’s income is 25% more than B’s. Find, B’s income is how much percent less than A’s.

Exercise-7(B)

Let B's income = Rs.100

then A's income = 100 + 25

= Rs.125

Now, difference of income of A and B

= Rs.(125 - 100) = Rs.25

If A's income is Rs.125, then B's income less than A = Rs.25

If A's income is Re.1, then B's income less than A

$$= \text{Rs.}\frac{25}{125}$$

If A's income is Rs.100, then B's income less

than A = $\text{Rs.}\left(\frac{25}{125}\times 100\right)$

$$= \frac{1}{5}\times 100 = \text{Rs.}20$$

$\therefore$ B's income is less than A's income = 20%

Exercise-7(B)

Question 6.
Mona is 20% younger than Neetu. How much percent is Neetu older than Mona?

Exercise-7(B)

Let Neetu's age = 100 years

then, Mona's age = 100 - 20 = 80 years

Difference of ages = 100 - 80 = 20 years

If Mona is 80 years, then Neetu is older than Mona by = 20 years

If Mona is 1 year, then Neetu is older than

$$\text{Mona by} = \frac{20}{80} \text{ years}$$

If Mona is 100 years, then Neetu is older than

$$\text{Mona by} = \frac{20}{80} \times 100 \text{ years} = \frac{20 \times 100}{80}$$

$$= 25\%$$

Home Assignment

Exercise 7(B) - 1 to 5

THANKING YOU

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