Class7 Chapter Percentage Test paper-3

1. What percent of a day is half an hour?
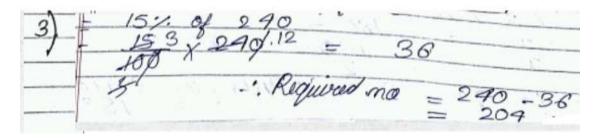
Q1) $x\%$ of day $= \frac{1}{2}$ hr

$\Rightarrow \frac{x}{100} \times 24$ hr $= \frac{1}{2}$ hr

$\Rightarrow x = \left(\frac{1}{2} \times \frac{100}{24}\right)^{25}$

$\Rightarrow x = \frac{25}{18} = 2\frac{1}{12}\%$

2. (a) Express as percentage: $\frac{3}{11}$; $\frac{7}{25}$; $\frac{6}{1}$ (b) express as Fraction $33\frac{1}{3}\%$; $66\frac{2}{3}\%$; 75%

2)a) i) $\frac{3}{11} = \frac{3}{11} \times 100\% = \frac{300}{11} = 27\frac{3}{11}\%$

ii) $\frac{7}{25} = \frac{7}{25} \times 100\% = 28\%$

iii) $\frac{6}{10} = \frac{6}{10} \times 100\% = 60\%$

b) i) $33\frac{1}{3}\% = \frac{100}{3}$

ii) $66\frac{2}{3}\% = \frac{200}{3}$

iii) $75\% = \frac{75}{100} = \frac{15}{20} = \frac{3}{4}$

3. Find the number which is 15% less than 240

$$15\% \text{ of } 240$$
$$\frac{15}{100} \times 240 = 36$$

∴ Required no = 240 − 36
= 204

4. Express as Decimal $25\%, 125\%, 16\frac{2}{3}\%, 1\%$

04) i) $25\% \Rightarrow \frac{25}{100} = 0.25$

ii) $125\% = \frac{125}{100} = 1.25$

iii) $16\frac{2}{3}\% = \frac{50}{3} \div 100 = \frac{50}{3} \times \frac{1}{100} \Rightarrow \frac{1}{6} = 0.16$

iv) $1\% = \frac{1}{100} = 0.01$

5. Express as percentage: $1.25, 0.01 \ 0.056$

05) a) $1.25 = \frac{1.25 \times 100}{100} = 125\%$

b) $0.01 = \frac{0.01 \times 100}{100} = 1\%$

c) $0.056 = \frac{0.056 \times 100}{1000} = 5.6\%$

6. Fill in the blanks: (i) 7 Paisa = _____ % of a rupee   (ii) 200 gm = _____% of a kg

(ii) 50 cm = _____% of a meter   (iv) 216 ml = _____% a lit.

(v) 650 m = __% of a km   (v) 30 ml = _____% of a lit.

06) i) 7 paisa = ___7%___ of a rupee

ii) 200 gm = $\frac{200}{1000} \times 100$ of a kg

iii) 50 cm = $\frac{50}{100} \times 100$ of a meter

iv) 215 ml = $\frac{215}{1000} \times 100$ of a litre = 21.5

v) 550 m = $\frac{550}{1000} \times 100$ of a km. = 55

vi) 80 ml = $\frac{30}{1000} \times 100 = 3$ of a litre = 3

7. Find (i) 30% of 50 (ii) 90 % of 100 (iii) $3\frac{1}{5}$ % of 500

07) i) 30 % of 50

→ $\frac{30}{100} \times 50 = 15$

ii) 90 % of 100

→ $\frac{90}{100} \times 100 = 90$

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iii) $\frac{31}{5}$ % of 500

→ $\frac{31}{5} \times \frac{1}{100} \times 500 = 31$

8. What is the number whose 50 % is equal to 80.

Q8) Let the number be x

$$50\% \text{ of } x = 80$$

$$\frac{50}{100} \times x = 80$$

$$x = \frac{80 \times 10^2}{5}$$

$$x = 16$$

9. What percent of 45 min. is 15 min   10. Which is more 20 % of 450 or, 40 % of 230

9) $\frac{x}{100} \times 45 = 15$

$x = \frac{15 \times 100}{45}$ $\frac{3}{3}$

$x = 33\frac{1}{3}$

10) $\frac{20^{10}}{100} \times 450^9 = 90$
  $\frac{}{2}$

$\frac{40}{100} \times 230 = 92$

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So, 40 % of 230 is more

11. Neha got 68% in Hindi. Find how many marks he got out of 25 ?

11) $\frac{68^{17}}{100} \times 25 = 17\%$
       $\frac{}{50}$ $\frac{}{2}$

12. An alloy consists of 30% copper and 40% zinc, and the remaining is nickel. Find the amount of nickel in 20 kilograms of the alloy.

12) Nickel $= 30\% \cdot \text{Alloy}$

$= \dfrac{30}{100} \times 20$

$= 6 \ Kg$

13. 90 % of total student were present. Find the percentage of student absent if total students were 1200?

13(i) Present $= 90\%$ of student

Absent $= 10\%$ of student

$= \dfrac{10}{100} \times 1200 = 120$ students

14. Ashas's age is 20 % more than Sneha's age . Find the age of Sneha's if the age of Asha is 20 years.

3(ii) Asha age $= 20$ yr, Sneha $= 20$yr $+ 20\%$ of 20

$= 20 + \dfrac{20}{100} \times 20$

$= 24$ yrs

15. To pass an examination 48 % of marks are needed. Rahul gets 168 marks and fail by 36 marks .What is the maximum marks of Examination.

15) Pass $= 48\%$ of max marks

$(168 + 36) = \dfrac{48}{100} \times x$

$204 = \dfrac{48}{100} \times x$

$\dfrac{204 \times 100}{48} = x$

$425 = x$

16. A number is increased by 10% and then decreased by 10 %. Find net increase or decrease per cent.

16) Let no be = 100

Increase = $100 + 10\%$ of 100
= $100 + 10$
= 110

Decreased no = $110 - 10\%$ of 110
= $110 - \frac{10}{100} \times 110$
= $110 - 11$
= 99

Net decrease = $100 - 99$
= 1%

17. In a class, section A has 42 boys out of total 75 students, section B has 60% girls in total student strength of 80 and section C has two third boys among 45 students. Find the aggregate percentage of boys.

17) Section A → Boys = 42, Total student = 75

% of boys = $\frac{42}{75} \times 100 = 56\%$

Section B → girls = 60, Boys = 80, 20,
Student = 80, % of boys = $\frac{20}{80} \times 100 = 25\%$

Section C → Boys = $\frac{2}{3} \times 45 = 30$, total = 45

% of boys = $\frac{30}{45} \times 100$
= $\frac{200}{3} = 66\frac{2}{3}\%$

18. Prices of bananas have changed from 5 for a rupee to 4 for a rupee. Find the percentage increase in price.

18) Original price 5 for Re 1

Cost of 1 bananas $= \frac{1}{5} = 0.20$ paisa

New price 4 for ₹

Now Price of 1 banana $= \frac{1}{4} = 0.25$ paisa

increase in price $= 0.25 - 0.20$
$= 0.05$

% increase $= \left(\frac{0.05}{0.20} \times 100 \right) = 0.25 \%$

19. Sandhy's height increased by 20% last year and by 15% this year. What is the total percent increase in 2 years?

19) Let original height $= 100$ cm

heights increase in least yrs $= 20 \%$ of $100 = 20$

New height $= 100 + 20$
$= 120$ cm

Height increase in this yrs $= 15 \%$ of 120

$\frac{15^3}{100} \times 120^6 = 18$ cm

New height $= 120 + 18$
$= 138$

Net increase in height $= 138 - 100$
$= 38$

% increase $= \left(\frac{38}{100} \times 100 \right) \%$
$= 38 \%$

20. Price of a commodity decreased by 10% last year and increased by 20% this year. Find the % change in price in two years.

20) Let original price = 100%.

Decrease in last year = 10% of 100

$$= 10$$

New price = 100 − 10

$$= 90$$

Price increase in this yr = 20% of 90

$$= \frac{20}{100} \times 90$$

$$= 18$$

New Price = 90 + 18

$$= 108$$

Net increase = 108 − 100

$$= 8\%$$