

CAVALRY DEFENCE ACADEMY, (CDA)

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Achieve it

PERCENTAGE



$$5\% = \frac{1}{20}$$

$$\frac{1}{2} + \frac{1}{4} + \frac{1}{4}$$

$$15\% = \frac{3}{20}$$

$$10\% = \frac{1}{10}$$

$$15\% = \frac{3}{20}$$

$$20\% = \frac{1}{5}$$

$$25\% = \frac{1}{4}$$

$$30\% = \frac{3}{10}$$

$$50\% = \frac{1}{2}$$

$$75\% = \frac{3}{4}$$

$$30\% = \frac{3}{10}$$

$$25\% = \frac{1}{4}$$



Anjeet

Monday fraction
Remind

$\frac{3}{8}, \frac{5}{8}, \frac{1}{8}, \frac{7}{8}$

Var

50%

25%

25%

75%

100%

150%

200%

250%

300%

PERCENTAGE

PERCENT

- The word percent is an abbreviation of the Latin phrase 'per centum' which means per hundred or hundredths.

98 - 3171
21200

Per Centum

Per hundred
Routine life

% easy



PERCENTAGE

PERCENT AS A RATIO

- A percent can be expressed as a ratio with its second term 100 and first term equal to the given percent.

For example: $8\% = 8/100 = 2/25 = 2:25$

and

$36\% = 36/100 = 9/25 = 9:25$

$$8\% = \frac{8}{100} = \frac{2}{25} = 2:25$$

$$36\% = \frac{36}{100} = \frac{9}{25} = 9:25$$



PERCENTAGE

PERCENT IN DECIMAL FORM

- To convert a given percent in decimal form, we express it as a fraction with denominator as 100 and then the fraction is written in decimal form.

For example, $.65\% = 65/100 = 0.62$,

$$7.4\% = 7.4/100 = 0.074$$

Handwritten calculations for percentage conversion:

$$65\% = \frac{65}{100} = .65$$
$$7.4\% = \frac{7.4}{100} = .074$$

Additional handwritten calculation:

$$\frac{64}{10000} = .0064$$



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1. Express each of the following as a fraction:

(i) 48%

$$\begin{aligned} &\downarrow \\ &= \frac{48}{100} \\ &= \frac{12}{25} \end{aligned}$$

(ii) 220%

$$\begin{aligned} &\downarrow \\ &= \frac{220}{100} \\ &= \frac{11}{5} \end{aligned}$$

(iii) 2.5%

$$\begin{aligned} &\downarrow \\ &= \frac{2.5}{100} \\ &= \frac{25}{10000} \\ &= \frac{1}{400} \end{aligned}$$



PERCENTAGE

2. Express each of the following as a decimal:

(i) 6%

$$\downarrow \frac{6}{100} = .06$$

(ii) 72%

$$\downarrow .72$$

(iii) 125%

$$\downarrow 1.25$$

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3. Express each of the following as a percentage:

(i) $9/25$

$$\begin{array}{r} \downarrow \\ 9 \times 100 \\ \hline 25 \\ \hline = 36\% \end{array}$$

(ii) $3/125$

$$\begin{array}{r} \downarrow \\ 3 \times 100 \\ \hline 125 \\ \hline = \frac{12}{5}\% \end{array}$$

(iii) $12/25$

$$\begin{array}{r} \downarrow \\ 12 \times 100 \\ \hline 25 \\ \hline = 48\% \end{array}$$



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4. Convert the ratio to percentage.

$$3:4 \Rightarrow \frac{3}{4} \Rightarrow 75\%$$

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5. Express 125 % as a ratio.

$$\begin{aligned} &= \frac{125}{100} \\ &= \frac{5}{4} \end{aligned}$$

5 : 4 Answer



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✓ 6. Which is largest in $6\frac{2}{3}\%$, $\frac{3}{20}$ and 0.14?

(14) (7) (43)

~~$\frac{20}{3} \times 100$~~
 ~~$\frac{2000}{3}$~~
14, 7, 43

~~$\frac{20}{3} \times 100$~~
 ~~$\frac{2000}{3}$~~
14, 7, 43

$\frac{1}{15}$

$\frac{3}{20}$

~~$\frac{14}{100}$~~

$\frac{15}{50} = 0.14$

(fraction)

Amjeet $\frac{1}{2}$
 $= \frac{\text{Amjeet}}{100}$



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$$\frac{96}{180} \times 100$$

7. (i) What per cent of 150 is 96?

(ii) What per cent of 5 kg is 200 g?

(iii) What per cent of 2 litres is 250 mL?

$$\frac{96}{150} \times 100$$

500g ans

I →

$$\frac{x}{100} \times 150 = 96$$

$$3x = 96 \times 2$$
$$x = \frac{96 \times 2}{3} = 64\%$$

$$\frac{96}{150} \times 100$$

$$\frac{96}{150} \times 100$$

$$100$$



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8. Find $4\frac{1}{2}\%$ of ₹ 3600.



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9. A man saves 18% of his monthly income. If he saves ₹ 3780 per month, what is his monthly income?

$$\frac{3780 \times 100}{18}$$

$$\frac{3780}{18} \times 100 = 21000$$

$$\frac{3780}{18} \times 100 = 21000$$

Ans = 21000
Three Method



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10. A football team wins 7 games, which is 35 % of the total games played. How many games were played in all?

again
all the question
will

15

16

Question No-15



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11. If 16% of a number is 7, find the number.



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12. A number 4 is wrongly is read as 4.48
find percentage error?



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13. In a consignment of 500 articles 70 article are broken .find the percentage change ?



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14. In an exam passing percentage is 40 percent if a candidate got 65 marks and fails by 3 marks find maximum marks?



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15. In an election between two candidate one secured 43% of total valid votes polled and valid and lost election by 4900 find the total number of votes polled?

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16. 5% of a town died in bombardment 7% remaining died in panic if the population of town is 44175 find the original population?



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17. In an exam, 30 percent of candidate failed in English 35% failed in mathematics 27% failed in both the subject. Find

- Total percentage of failed
- Percentage of total pass
- Total number of candidate if 248 passed in both

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18. If the price of rice is increased by 20% today how much percentage it should be decreased tomorrow?



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19. A number decreased by 18% become 410
find the number?



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20. Two numbers are 10% and 25% more than third number. What percent is first of second ?



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21. Amit was given an increment of 20% on his salary. If his new salary is ₹30600, what was his salary before the increment?

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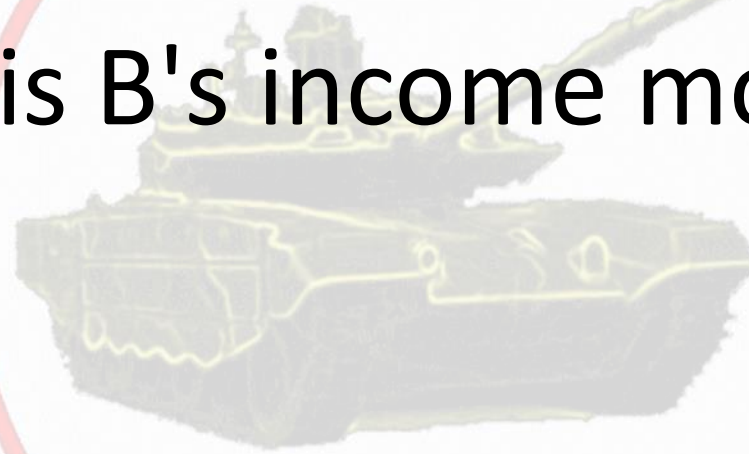
22. Sonal attended her school on 204 days in a full year. If her attendance is 85%, find the number of days on which the school was opened.

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23. A's income is 20% less than that of B. By what per cent is B's income more than A's?

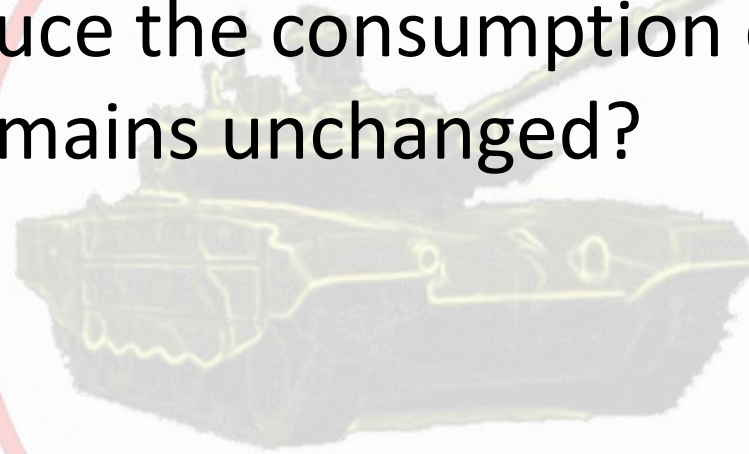


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24. The price of petrol goes up by 10%. By how much per cent must a motorist reduce the consumption of petrol so that the expenditure on it remains unchanged?



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25. The population of a town increases by 8% annually. If the present population is 54000. What was it a year ago?



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26. the value of a machine depreciates every year by 20%. If the present value of the machine be ₹ 160000. What was its value last year?

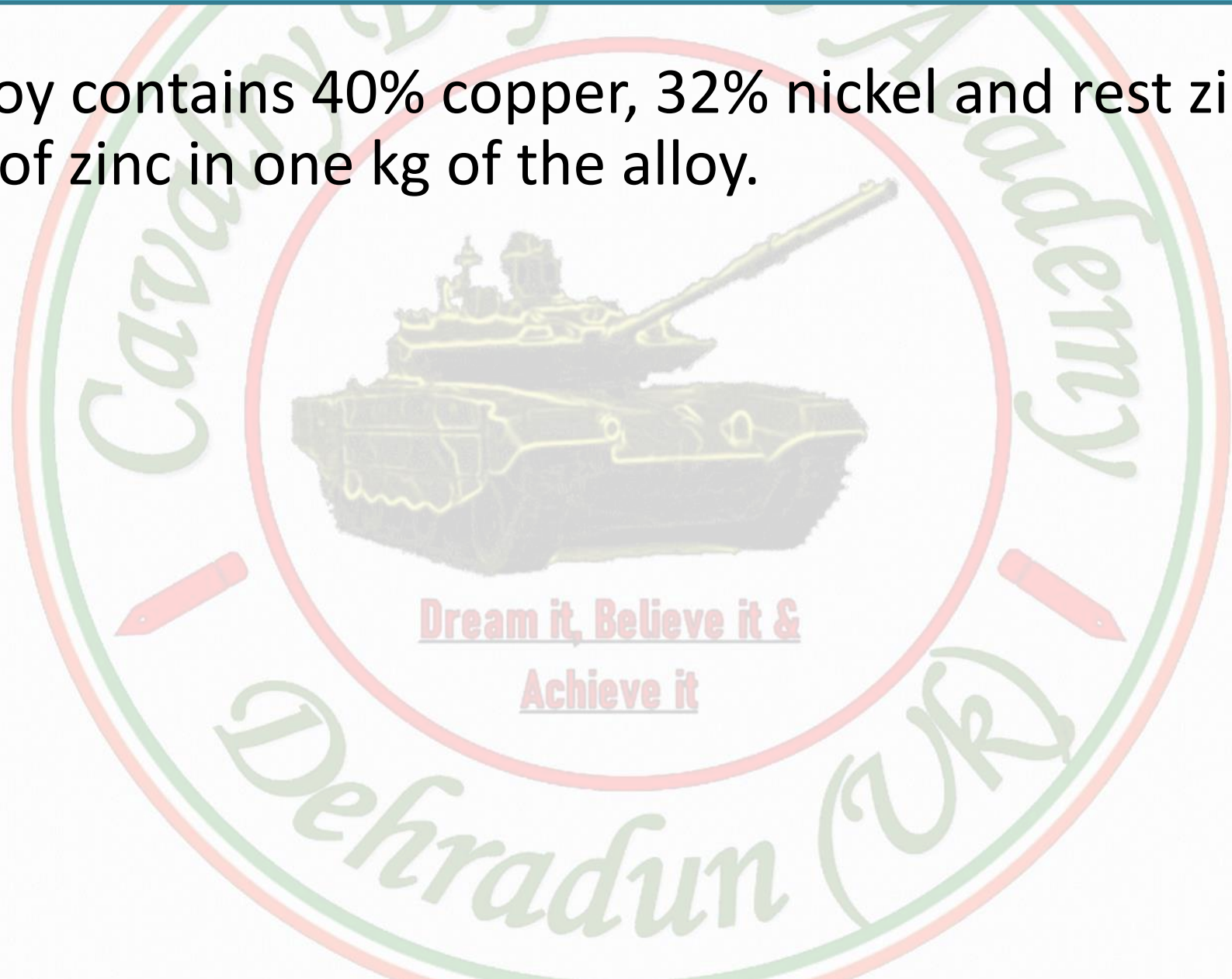


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27. An alloy contains 40% copper, 32% nickel and rest zinc. Find the mass of zinc in one kg of the alloy.



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28. Balanced diet should contain 12% of proteins, 25% of fats and 63% of carbohydrates. If a child needs 2600 calories in his food daily, find in calories the amount of each of these in his daily food intake.

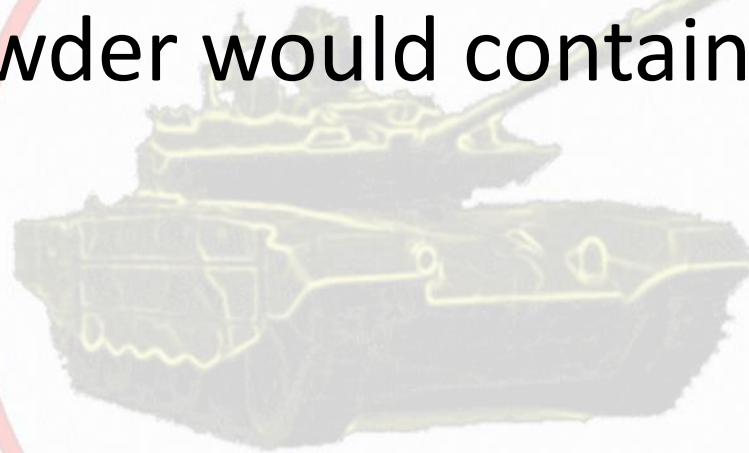


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29. Gunpowder contains 75% nitre and 10% sulphur. Find the amount of gunpowder which carries 9 kg nitre. What amount of gunpowder would contain 2.5 kg sulphur?



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30. Divide ₹ 7000 among A, B and C such that A gets 50% of what B gets and B gets 50% of what C gets.



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31. Find the percentage of pure gold in 22-carat gold, if 24-carat gold is 100% pure.

Hint. 22 carat gold contains 22 parts out of 24 parts

Percentage of pure gold in it $= (22/24 \times 100)\% = 91 \frac{2}{3} \%$.

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32. The salary of an officer is increased by 25%. By what per cent should the new salary be decreased to restore the original salary?



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