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PERCENTAGE

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**Put All Your Doubts in The Doubt Window.
Either Me or My Teaching Assistant Will
Answer All Your Queries.**

What is Percent & Percentage

$$\% = \frac{1}{100}$$

$$1\% = \frac{1}{100}$$

Percent

cent = 100

Per → for every
for each 100
100

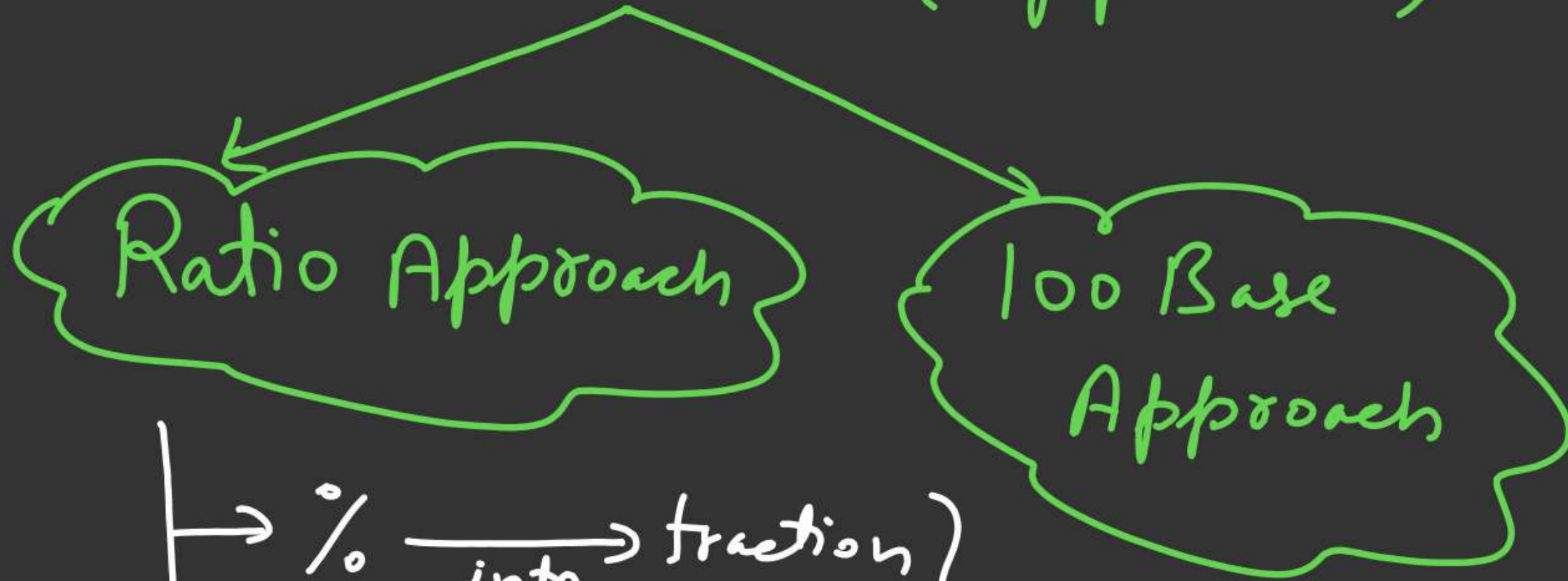
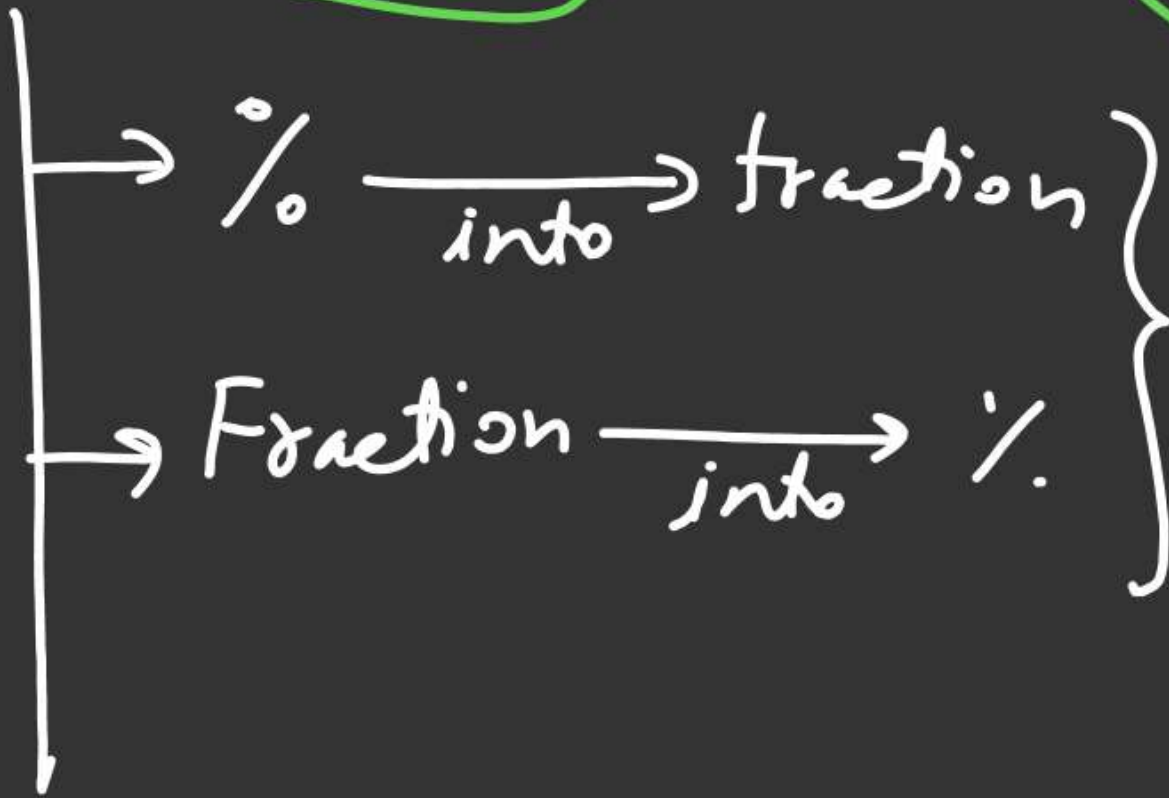


→ Sign of
Percent

$$\frac{\text{Numerical Value}}{\%} = \frac{1}{100}$$

Place → $\times 100$
Removing → $\times \frac{1}{100}$ ✓

Percent (Approach)



Fraction to percentage

$$\frac{1}{1} \times 100 = 100\%$$

$$\frac{1}{2} \times 100 = 50\%$$

$$\frac{1}{3} \times 100 = 33.33\%$$

$$\frac{1}{4} \times 100 = 25\%$$

$$\frac{1}{5} \times 100 = 20\%$$

$$\frac{1}{6} \times 100 = 16.67\%$$

$$\frac{1}{7} \times 100 = 14.28\%$$

$$\frac{1}{8} \times 100 = 12.5\%$$

$$\frac{1}{9} \times 100 = 11.11\%$$

$$\frac{1}{10} \times 100 = 10\%$$

$$\frac{1}{7} = 14.28\%$$

$$\frac{2}{7} = 28.56\%$$

$$\frac{3}{7} = 42.84\%$$

$$\frac{1}{8} = 12.5\%$$

$$\frac{3}{8} = 37.5\%$$

$$\frac{5}{8} = 62.5\%$$

$$\boxed{\frac{1}{9} = 11.11\%}$$

$$\begin{array}{c} \nearrow \times 2 \\ 22.22\% = \frac{2}{9} \end{array}$$

$$44.44\% = \frac{4}{9}$$

$$55.55\% = \frac{5}{9}$$

$$77.77\% = \frac{7}{9}$$

$$88.88\% = \frac{8}{9}$$

$$\frac{1}{11} = 9.09\%$$

$$\boxed{9.09\% = \frac{1}{11}}$$

$$18.18\% = \frac{2}{11}$$

$$27.27\% = \frac{3}{11}$$

$$36.36\% = \frac{4}{11}$$

$$\frac{1}{11} \rightarrow 9.09\%$$

Percentage to Fraction

$$1\% = \frac{1}{100}$$

$$2\% = \frac{\cancel{2}}{\cancel{100}} = \frac{1}{50}$$

$$3\% = \frac{3}{100}$$

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

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

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

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

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

$$100\% = \frac{1}{1} = 1$$

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

$$12\% = \frac{3}{25}$$

$$28\% = \frac{7}{25}$$

$$72\% = \frac{18}{25}$$

$$96\% = 100\% - 4\%$$

$$1 - \frac{1}{25} = \frac{24}{25}$$

Percentage to Fraction

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

$$40\% = \frac{2}{5}$$

$$60\% = \frac{3}{5}$$

$$80\% = \frac{4}{5}$$

$$100\% = \frac{5}{5} = 1$$

$$100\% = 1$$

$$200\% = 2$$

$$300\% = 3$$

$$400\% = 4$$

$$500\% = 5$$

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

$$\downarrow \times \frac{1}{2} \quad \left(\times \frac{1}{2} \right)$$

$$2.5\% = \frac{1}{40} \quad \checkmark$$

Percentage value

Complete
% Value.

5%
10%
20%
25%
55%

Mix-fractional
% value

$4\frac{1}{6}\%$

$14\frac{2}{7}\%$

Mix-fractional % Value into fraction

$$3\frac{1}{8} \% = \frac{1}{32}$$

(Note: 8 is multiplied by 4 to get 32)

$$4\frac{1}{6} \% = \frac{1}{24}$$

$$6\frac{1}{4} \% = \frac{1}{16}$$

$$8\frac{1}{3} \% = \frac{1}{12}$$

$$9\frac{1}{11} \% = \frac{1}{11}$$

$$11\frac{1}{9} \% = \frac{1}{9}$$

$$12\frac{1}{2} \% = \frac{1}{8}$$

$$14\frac{2}{7} \% = \frac{1}{7}$$

$$16\frac{2}{3} \% = \frac{1}{6}$$

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

$$66\frac{2}{3} \% = \frac{2}{3}$$

$$7\frac{1}{7} \% = \frac{1}{14}$$

$$\underline{214\frac{2}{7}}\% = 2 + \frac{1}{7} = \frac{15}{7}$$

$$\underline{137\frac{1}{2}}\% = 1 + \frac{3}{8} = \frac{11}{8}$$

$$12\frac{1}{2}\% = \frac{1}{8} \checkmark$$

$$37\frac{1}{2}\% = \frac{3}{8}$$

$$\underline{144.44}\% = 1 + \frac{4}{9} = \frac{13}{9} \checkmark$$

100% + 44.44%

$$255.55\% = 2 + \frac{5}{9} = \frac{23}{9}$$

$$327.27\% = 3 + \frac{3}{11} = \frac{36}{11}$$

300% + 27.27%

$$327.27\%$$

$$\underbrace{300\% + 27.27\%}$$

$$3 + \frac{3}{11} = \frac{33+3}{11} = \frac{36}{11}$$

$$\frac{1}{11} = 9.09\%$$

$$9.09\% = \frac{1}{11} \checkmark$$

1×2

$$18.18\% = \frac{2}{11}$$

$$27.27\% = \frac{3}{11} \checkmark$$

$$137\frac{1}{2}\% = 100\% + 37\frac{1}{2}\%$$

$$1 + \frac{3}{8} = \frac{11}{8} \quad \checkmark$$

$$12\frac{1}{2}\% = \frac{1}{8}$$

$\downarrow \times 3$

$$37\frac{1}{2}\% = \frac{3}{8} \quad \checkmark$$

$$\underline{445.45\%} = 4 + \frac{5}{11}$$

$$\boxed{400\% + 45.45\%} = \left(\frac{49}{11} \right) \checkmark$$

$5 \times 9.09\% = \frac{1}{11}$

$$563.63\%$$

$$\rightarrow 5 + \frac{7}{11} = \left(\frac{62}{11} \right) \checkmark$$

$$\checkmark 262\frac{1}{2}\% = 200\% + 62\frac{1}{2}\%$$

$$\checkmark 12\frac{1}{2}\% = \frac{1}{8}$$

(x5)

$$62\frac{1}{2}\% = \left(\frac{5}{8} \right) \checkmark$$

$$2 + \frac{5}{8}$$

$$= \left(\frac{21}{8} \right) \checkmark$$

$$\checkmark 387.5\%$$

$$\rightarrow 3 + \frac{7}{8} = \left(\frac{31}{8} \right) \checkmark$$

$$262\frac{1}{2}\% =$$

$$\checkmark 12\frac{1}{2}\% = 12 + \frac{1}{2}\%$$

→ $12 \times \frac{1}{2}$

$$12\frac{1}{2}\%$$

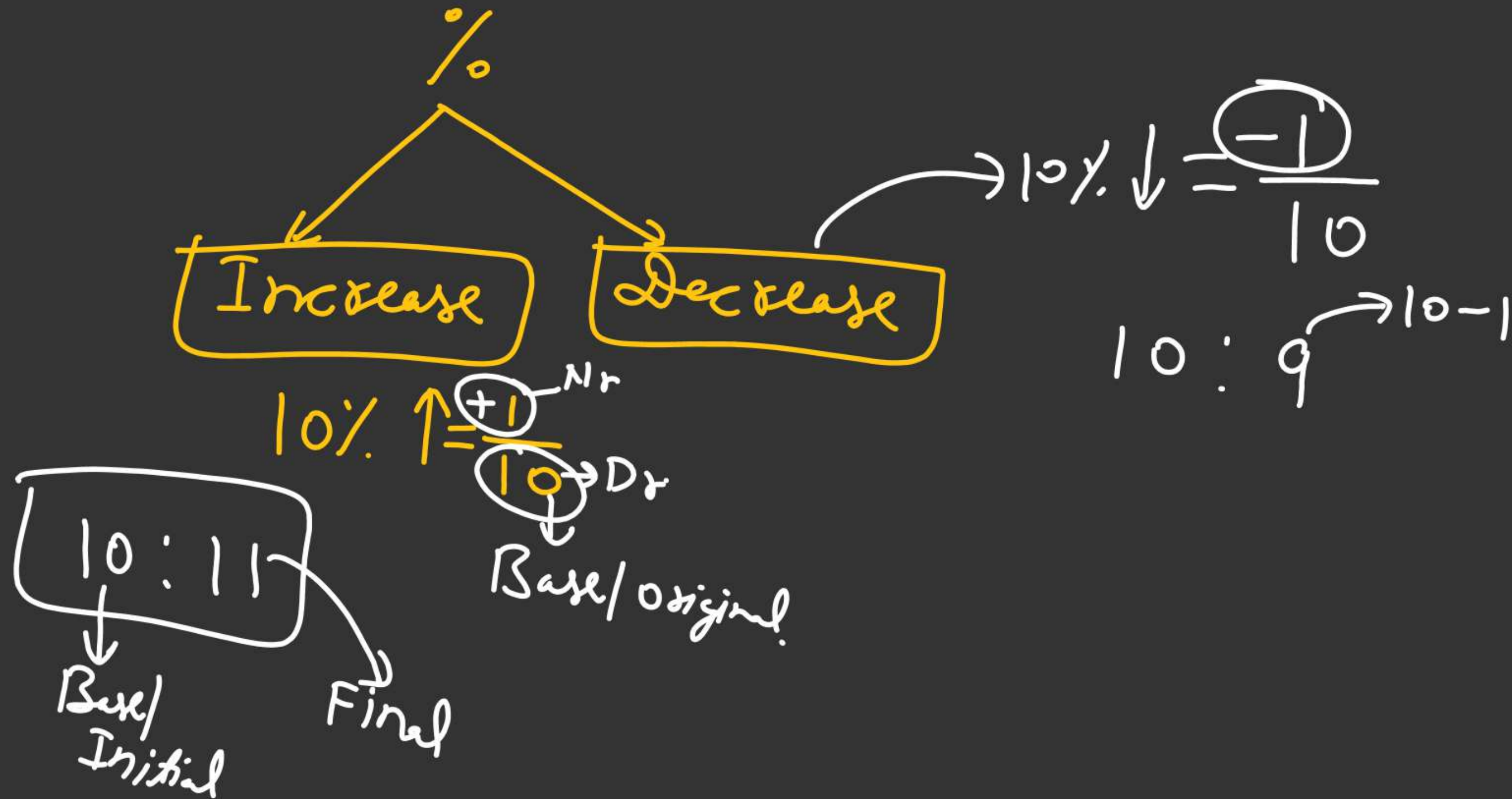
$$(12\frac{1}{2}) \times 5$$

$$60\frac{5}{2}$$

$$60 + 2\frac{1}{2}$$

$$62\frac{1}{2}\%$$

How to make ratio from fraction



$$20\% \uparrow = \frac{+1}{5} \quad \begin{array}{cc} I & F \\ 5 & : 6 \end{array}$$

$$14\frac{2}{7}\% \uparrow = \frac{+1}{\textcircled{7}} \quad \begin{array}{cc} I & F \\ 7 & : 8 \end{array}$$

$$16\frac{2}{7}\% \uparrow = \frac{1}{6} \quad \begin{array}{cc} I & F \\ 6 & : 7 \end{array}$$

$$44.44\% \uparrow = \frac{4}{9}$$

$$\boxed{\begin{array}{cc} I & F \\ 9 & : 13 \end{array}}$$

$$36.36\% \uparrow = \frac{6}{11}$$

$$\begin{array}{cc} I & F \\ 11 & : 17 \end{array}$$

$$20\% \downarrow = -\frac{1}{5} \quad \begin{array}{cc} I & F \\ S & : 4 \end{array}$$

$$16\frac{2}{3}\% \downarrow = -\frac{1}{6} \quad \begin{array}{cc} I & F \\ 6 & : 5 \end{array}$$

$$37\frac{1}{2}\% \downarrow = \frac{3}{8}$$

$$\begin{array}{cc} I & F \\ 8 & : 5 \end{array}$$

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

$$\begin{array}{cc} I & F \\ 10 & : 7 \end{array}$$

When 44.44% of a number is added in itself then the number becomes 52520. Find the original number?

किसी संख्या का 44.44% जोड़ने पर वह संख्या 52520 हो जाती है। मूल संख्या ज्ञात कीजिए?

H.W

- A) 26260
- B) 36360
- C) 46460
- D) 56560

When 45.45% of a number is added in itself then the number becomes 32640. Find the original number?

किसी संख्या का 45.45% जोड़ने पर वह संख्या 32640 हो जाती है। मूल संख्या ज्ञात कीजिए?

- A) 44550
- B) 33440
- C) 22440
- D) 11220

When 42.84% of a number is added in itself then the number becomes 12310. Find the original number?

किसी संख्या का 42.84% जोड़ने पर वह संख्या 12310 हो जाती है। मूल संख्या ज्ञात कीजिए?

- A) 8617
- B) 3344
- C) 8844
- D) None of these

When $16\frac{2}{3}\%$ of a number is added in itself then the number becomes 3563. Find the original number?

किसी संख्या का $16\frac{2}{3}\%$ जोड़ने पर वह संख्या 3563 हो जाती है। मूल संख्या ज्ञात कीजिए ?

- A) 2050
- B) 3564
- C) 4054
- D) 3054

When $6\frac{2}{3}\%$ of a number is subtracted from itself then the number becomes 8428. Find the original number?

जब किसी संख्या का $6\frac{2}{3}\%$ उसमें से घटा दिया जाए तो वह संख्या 8428 हो जाती है। मूल संख्या ज्ञात कीजिए?

- A) 2028
- B) 9030
- C) 4530
- D) None of these

When $14\frac{2}{7}\%$ of a number is subtracted from itself then the number becomes 5418 . Find the original number?

जब किसी संख्या का $14\frac{2}{7}\%$ उसमें से घटा दिया जाए तो वह संख्या 5418 हो जाती है। मूल संख्या ज्ञात कीजिए?

- A) 7028
- B) 9030
- C) 6321
- D) None of these

When 50 is added any number then number becomes $116\frac{2}{3}\%$ of itself. Find the original number and also find the final number?
जब किसी संख्या में 50 जोड़ा जाता है तो वह संख्या स्वयं की $116\frac{2}{3}\%$ हो जाती है। मूल संख्या ज्ञात कीजिए तथा अंतिम संख्या भी ज्ञात कीजिए?

- A) 300, 350
- B) 250, 300
- C) 200, 250
- D) None of these

When 96 is added any number then number becomes $157\frac{1}{7}\%$ of itself. Find the original number and also find the final number?

जब किसी संख्या में 96 जोड़ा जाता है तो वह संख्या स्वयं की $157\frac{1}{7}\%$ हो जाती है। मूल संख्या ज्ञात कीजिए तथा अंतिम संख्या भी ज्ञात कीजिए?

When 630 is added any number then number becomes $137\frac{1}{2}\%$ of itself. Find the original number and also find the final number?

जब किसी संख्या में 630 जोड़ा जाता है तो वह संख्या स्वयं की $137\frac{1}{2}\%$ हो जाती है। मूल संख्या ज्ञात कीजिए तथा अंतिम संख्या भी ज्ञात कीजिए?

When 930 is added any number then number becomes $444\frac{4}{9}\%$ of itself. Find the original number and also find the final number?

जब किसी संख्या में 930 जोड़ा जाता है तो वह संख्या स्वयं की $444\frac{4}{9}\%$ हो जाती है। मूल संख्या ज्ञात कीजिए तथा अंतिम संख्या भी ज्ञात कीजिए?

The price of milk is increased by $16\frac{2}{3}\%$ and the consumption of a family is decreased by 20%. Find the percentage change in his expenditure?

दूध की कीमत $16\frac{2}{3}\%$ बढ़ जाती है और एक परिवार की खपत 20% कम हो जाती है। उसके व्यय में प्रतिशत परिवर्तन ज्ञात कीजिये?

The price of sugar is increased by $6\frac{2}{3}\%$ and the consumption of a family is decreased by 25%. Find the percentage change in his expenditure?

चीनी की कीमत $6\frac{2}{3}\%$ बढ़ जाती है और एक परिवार की खपत 25% कम हो जाती है। उसके व्यय में प्रतिशत परिवर्तन ज्ञात कीजिये?

If the length of a rectangle is increased by $37\frac{1}{2}\%$ and its breadth is decreased by 20%. Find the percentage change in its area?

यदि एक आयत की लंबाई $37\frac{1}{2}\%$ बढ़ा दी जाती है और इसकी चौड़ाई 20% कम कर दी जाती है। इसके क्षेत्रफल में प्रतिशत परिवर्तन ज्ञात कीजिये?



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Thank You



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