

MATHS SPECIAL



PRE + MAINS

LIVE CLASS (ONE TO ONE INTERACTION)

**REGISTRATION
OPEN**

BILINGUAL CONTENT

1 YEAR VALIDITY

INCLUDES

- ☐ LIVE Classes
- ☐ Result Oriented Approach
- ☐ PDF Notes
- ☐ Conceptual Clarity

USEFUL FOR

- ☐ SSC EXAMS
- ☐ BANK EXAMS
- ☐ CSAT
- ☐ STATE GOVT. EXAMS

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SACHIN BALIYAN SIR

MATHS SYLLABUS



ARITHMETIC:

(SSC/BANK/CUET/CSAT/STATE GOVT)

Time and Work
Pipe and Cistern

Percentage

Profit Loss and Discount
Compound Interest
Simple Interest

Average
Ratio and Proportion
Based of Ages
Partnership
Mixture and Alligation

Time Speed And Distance
Train
Race
Boat and Stream



BANK:

Number Series
Quadratic Equation
Simplification
Approximation

Data Interpretation

Mensuration

Permutation
Combination
Probability

SSC:

Number System
LCM + HCF

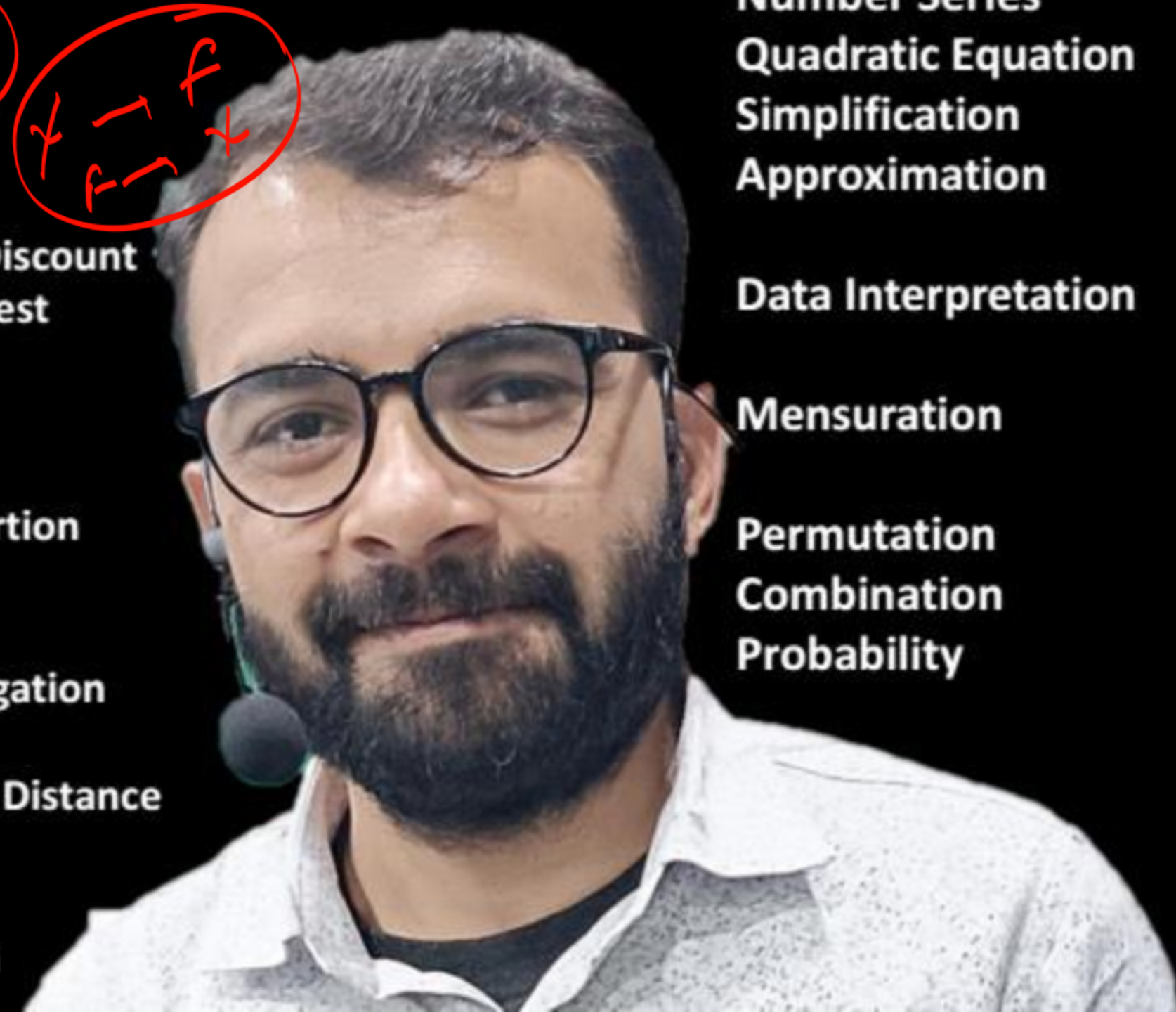
Surds
Indices
Algebra

Trigonometry
Height and Distance

Geometry

Mensuration-2D
Mensuration-3D

Co-ordinate Geometry



PERCENTAGE

Basic

①

Percentage to Fraction

②

Fraction to Percentage



① Percentage to Fraction

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

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

$$16\frac{2}{3}\% \Rightarrow \frac{50}{3} \times \frac{1}{100}$$

$$\frac{1}{6}$$

$$6\overset{\circ}{2}\overset{\circ}{\textcircled{3}}\% \Rightarrow \textcircled{\frac{1}{15}}$$

$$12\overset{1}{\textcircled{2}}\% \textcircled{\frac{1}{8}}$$

$$14\overset{2}{\textcircled{7}}\% \textcircled{\frac{1}{7}}$$

$$7\overset{1}{\textcircled{7}}\% \textcircled{\frac{1}{14}}$$

$$\begin{array}{c}
 \text{2} \\
 \frac{200}{9} \times \frac{1}{100}
 \end{array}
 \Rightarrow
 \begin{array}{c}
 \text{2} \\
 \frac{2}{9}
 \end{array}
 \cdot \frac{1}{10}
 \Rightarrow
 \begin{array}{c}
 \text{2} \\
 \frac{2}{9}
 \end{array}
 \cdot \frac{1}{10}
 \Rightarrow
 \begin{array}{c}
 \text{2} \\
 \frac{2}{9}
 \end{array}
 \cdot \frac{1}{10}$$

(Note: The original image contains additional handwritten annotations including a circled '180', a circled '2/9', and a circled '2/9' with a horizontal line through it, which are not part of the main mathematical derivation.)

1280

42 $\sqrt{6}$ %

$$\frac{3}{7}$$

0/0 \rightarrow Fraction

$\frac{2}{4}$ \rightarrow Given
 \rightarrow Compare

$\frac{x}{y}$ \rightarrow Given
 \rightarrow compare

Speed of A

is

$16\frac{2}{3} - 1$

more

than

Sp

+

6

A : B
7 : 6

①

A is $16\frac{2}{3}\%$ more than B.

$(+)\frac{1}{6}$

A : B
7 : 6

②

A is $16\frac{2}{3}\%$ less than B.

$(-)\frac{1}{6}$

A : B
5 : 6

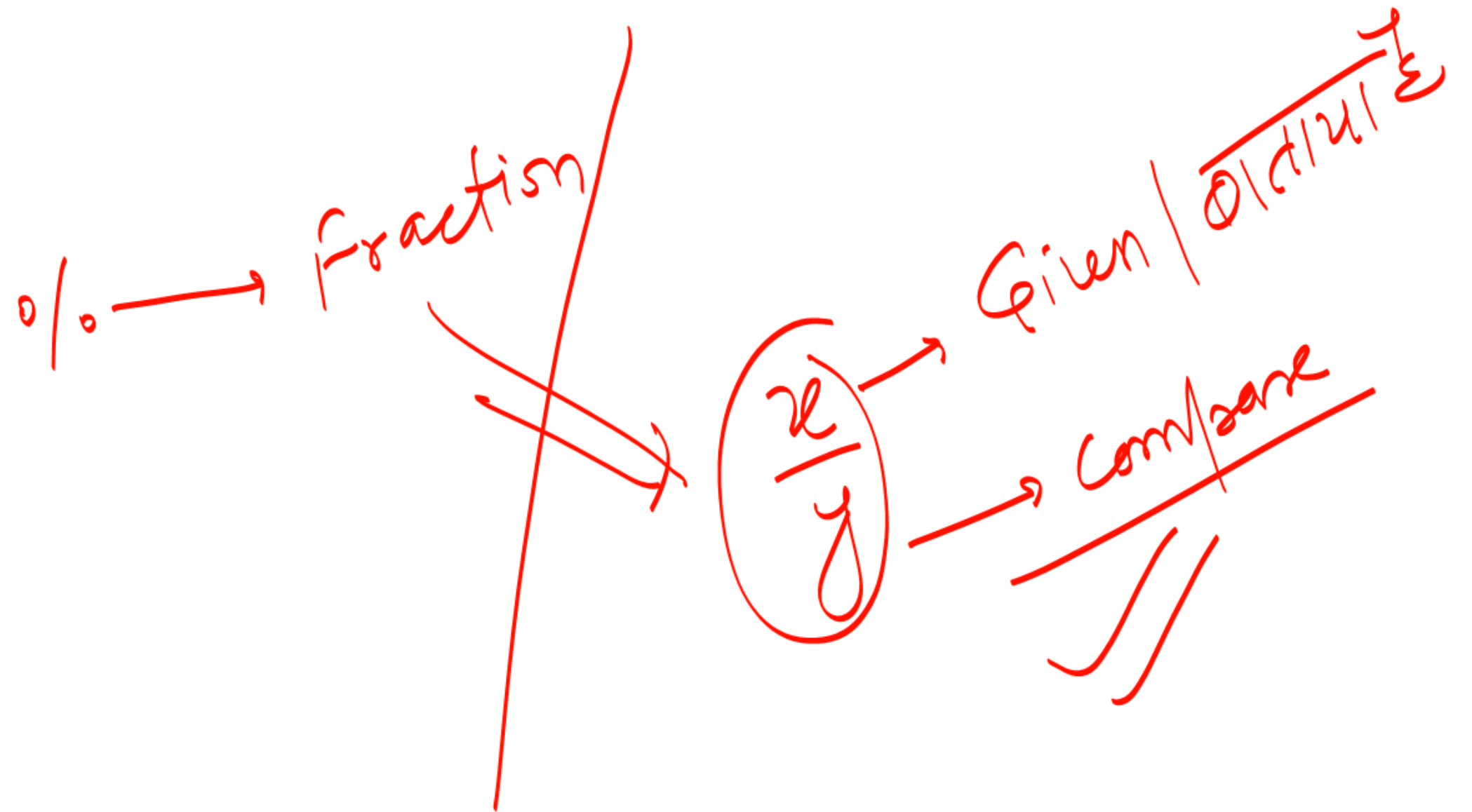
~~③~~

~~A~~

is $16\frac{2}{3}\%$ of B

$\frac{1}{6}$

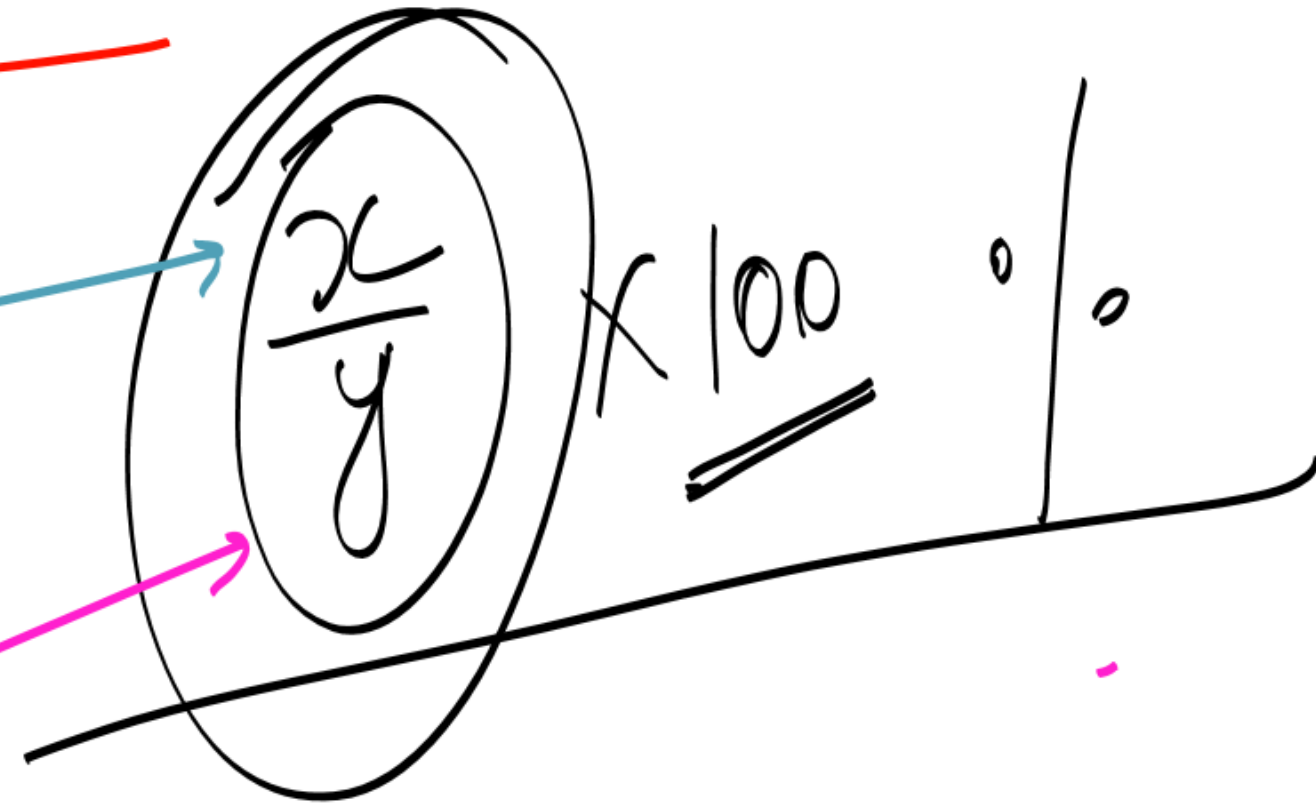
A : B
1 : 6



fraction \rightarrow %

دیا گیا ہے
(Given)

~~compare~~


$$\left(\frac{x}{y} \right) \times \underline{\underline{100}} \%$$

$$F \rightarrow \%$$

Shivani :

~~Asha~~

$$\frac{x}{y}$$

~~120~~

40

~~160~~

$$\frac{120}{160} \times 100\%$$

①

~~8~~

is how much % of ~~A~~

②

~~A~~

is how much % of ~~8~~

③

~~8~~

is how much %

~~less~~

than ~~A~~

$$\frac{40}{160} \times 100$$

$$\frac{160}{120} \times 100$$

(14)

Q is how much % more than ~~80~~

$f \rightarrow \%$

$$\frac{40}{120} \times 100$$

$$\text{if } \cancel{80\% \text{ of } A} = \cancel{120\% \text{ of } B}$$

therefore

A is how much % of B.

$$\frac{A}{B} \rightarrow \frac{3}{2}$$

$$\frac{A}{B} \times 100$$

$$\Rightarrow \frac{3}{2} \times 100 = 150\%$$

A

$16\frac{2}{3} \cdot 1.7 - 13$

$$\frac{B}{A} \times 100$$

$$\frac{6}{1} \times 100$$

600%

$$\frac{1}{6}$$

$$\begin{array}{r} A : B \\ \hline 1 : 6 \end{array}$$

→ more (+)
→ less (-)
→ x

$$\begin{array}{r} 713.6 \\ \hline 219.8 \end{array}$$

A → $\frac{2}{9} \cdot \frac{2}{9}$ % B

$\frac{2}{9}$

A : B
2 : 9

Diagram illustrating a cycle between two nodes:

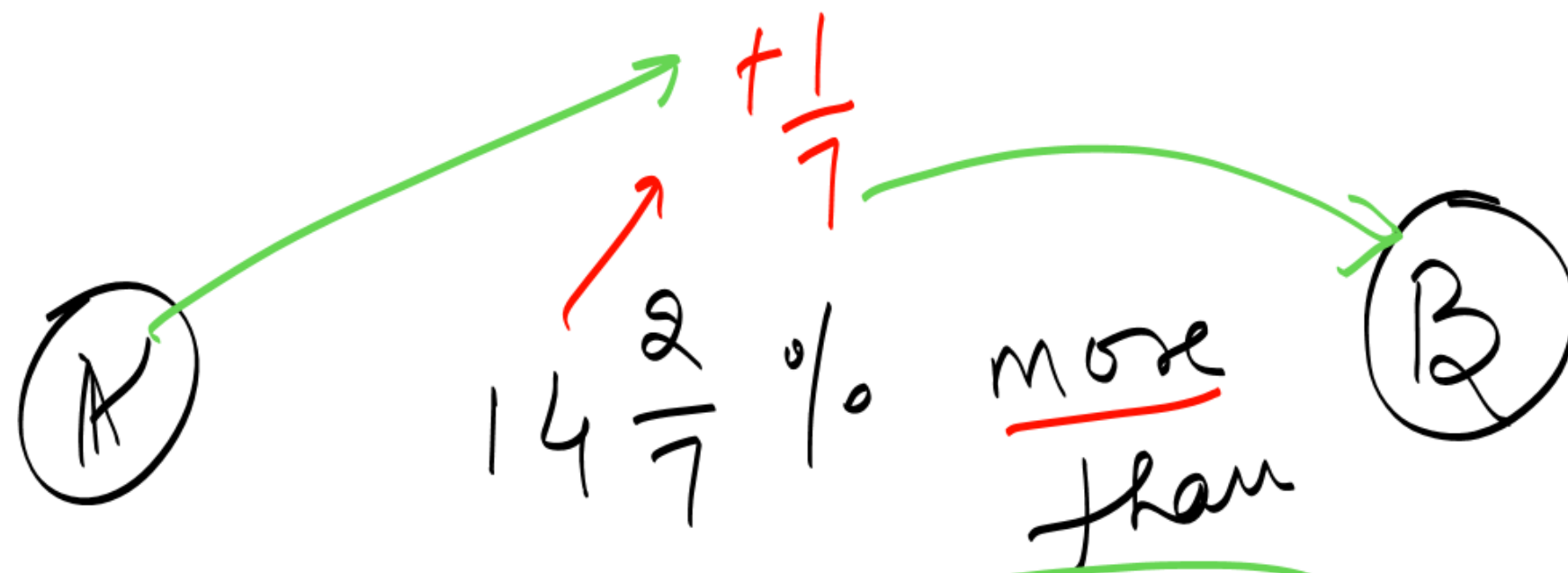
- Left node: B
- Right node: $1 \ 2 \ \frac{1}{2} \ 7$
- Edge from B to the right node: $+ \frac{1}{8}$
- Edge from the right node to B : (unlabeled)

Annotation below the right node: more than C.

Calculation at the bottom:

$$\begin{array}{r} B : C \\ \hline 9 : 8 \end{array}$$

$$\frac{A^p \cdot B}{8^p \cdot 7}$$



therefore
much % of height of A is how

height of B

$$\frac{175 + 1}{2}$$

87.5

$$\frac{7}{8} \times 100 = 87.5$$