

Ratio Basics

Course on Ratio & Proportion for SSC Exams

Robin Sharma • Lesson 1 • Nov 3, 2022

HS \rightarrow H | P | L | E | P | C | B | S | K | A | A

\longrightarrow

Quant \rightarrow P | P | L | S | L | T | L | A | V | I

\longrightarrow

Ratio 40

(X)

(Y)

$$\left\{ \begin{array}{l} X : Y \\ Y : X \end{array} \right. \longrightarrow \frac{X}{Y}$$
$$\left\{ \begin{array}{l} X : Y \\ Y : X \end{array} \right. \longrightarrow \frac{Y}{X}$$

A

B

A : B

115 A

:

120 B



$$\frac{115}{120}$$

$$= \frac{23}{24}$$

— Simplified $\frac{115}{120}$ →

$$A = 510$$

$$B = 360$$

$$\underline{A:B}$$

(Simplified)

$$\frac{510}{10} : \frac{360}{10}$$

$$\frac{51}{1} : \frac{36}{1}$$

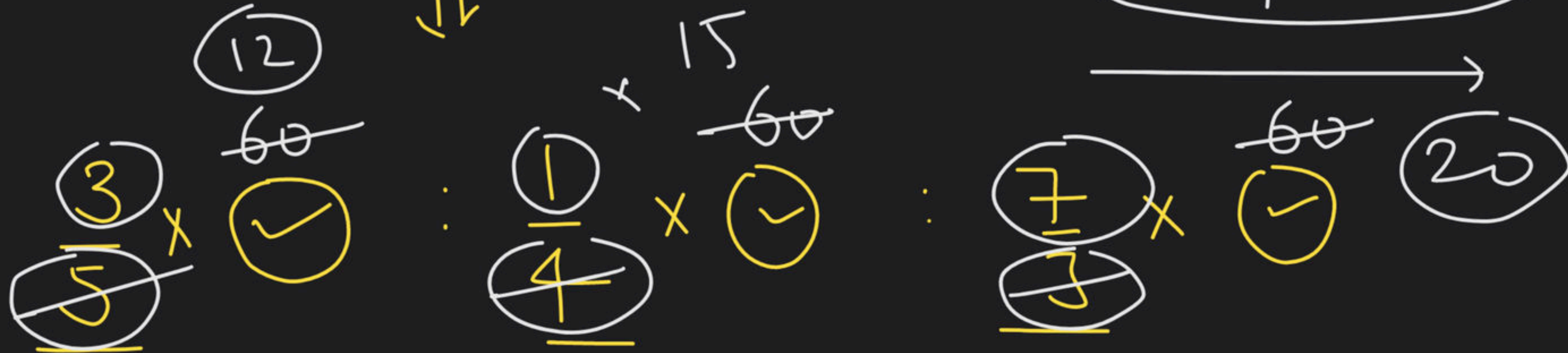
$$17 \times 3 : 12 \times 3$$

$$17:12$$



(x, y, z)

$x : y : z$



$36 : 15 : 140 \Rightarrow$

$$\Rightarrow \left\{ \textcircled{3A} = 4B = 5C \right\} \longrightarrow \textcircled{K}$$

$$A : B : C = ? \quad \textcircled{20 : 15 : 12}$$

$$A = \frac{K}{\textcircled{3}}$$

$$B = \frac{K}{\textcircled{4}}$$

$$C = \frac{K}{5}$$

$$\cancel{K}/3 :$$

$$\cancel{K}/4 :$$

$$\cancel{K}/5 =$$

$$\overset{\cancel{1} \times 60}{\textcircled{\cancel{3}}} : \overset{\cancel{1} \times 60}{\textcircled{\cancel{4}}} : \overset{\cancel{1} \times 60}{\textcircled{\cancel{5}}}$$

$$\overset{\sim}{\underset{\sim}{\textcircled{3}}^A} = \overset{\sim}{\underset{\sim}{\textcircled{4}}^B} : \overset{\sim}{\underset{\sim}{\textcircled{5}}^C} = \left\{ \begin{array}{c} \textcircled{60} \\ \textcircled{20 : 15 : 12} \end{array} \right.$$

$$4 \times 5 : 3 \times 5 : 3 \times 4$$

$$20 : 15 : 12$$

$$\begin{array}{ccc} \underline{A} & \underline{B} & \underline{C} \\ \hline \textcircled{20} & 15 & : 12 \end{array}$$

1/

$$\underline{A:B} = 7:6$$

&

$$\underline{B:C} = 5:9$$

$$A:B:C = ?$$

$$\underline{A:B} \longrightarrow \begin{matrix} 5 \times \\ 7 \end{matrix}$$

$$\begin{matrix} 30 \\ \boxed{6} \times 5 \end{matrix}$$

$$\underline{B:C} \longrightarrow$$

$$\begin{matrix} \boxed{5} \\ = \times 6 \\ 30 \end{matrix}$$

$$\begin{matrix} 9 \times 6 \end{matrix}$$

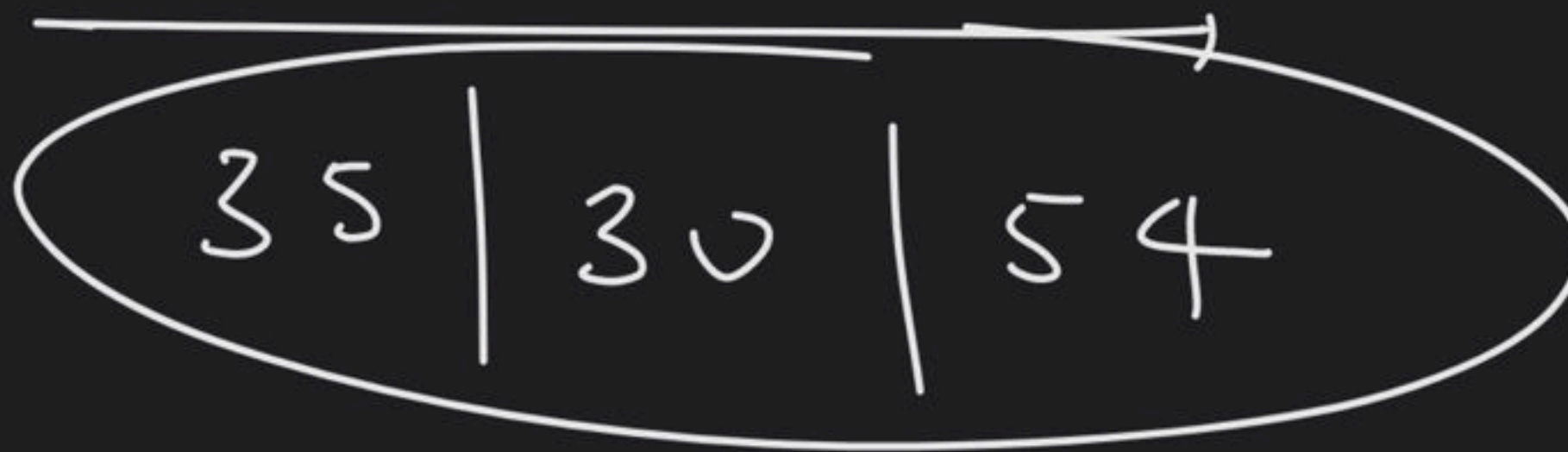
A : B : C →

35 : 30 : 54

A : B \longrightarrow



B : 6 \longrightarrow 5 : 9



A : B : C

$$\frac{a}{b} = \frac{c}{d}$$

→

$$\left\{ \frac{a+b}{a-b} = \frac{c+d}{c-d} \right\}$$

$$\frac{a}{b} + 1 = \frac{c}{d} + 1$$

→

$$\frac{a+b}{b} = \frac{c+d}{d}$$

$$\frac{a+b}{\cancel{b}} = \frac{c+d}{\cancel{d}}$$

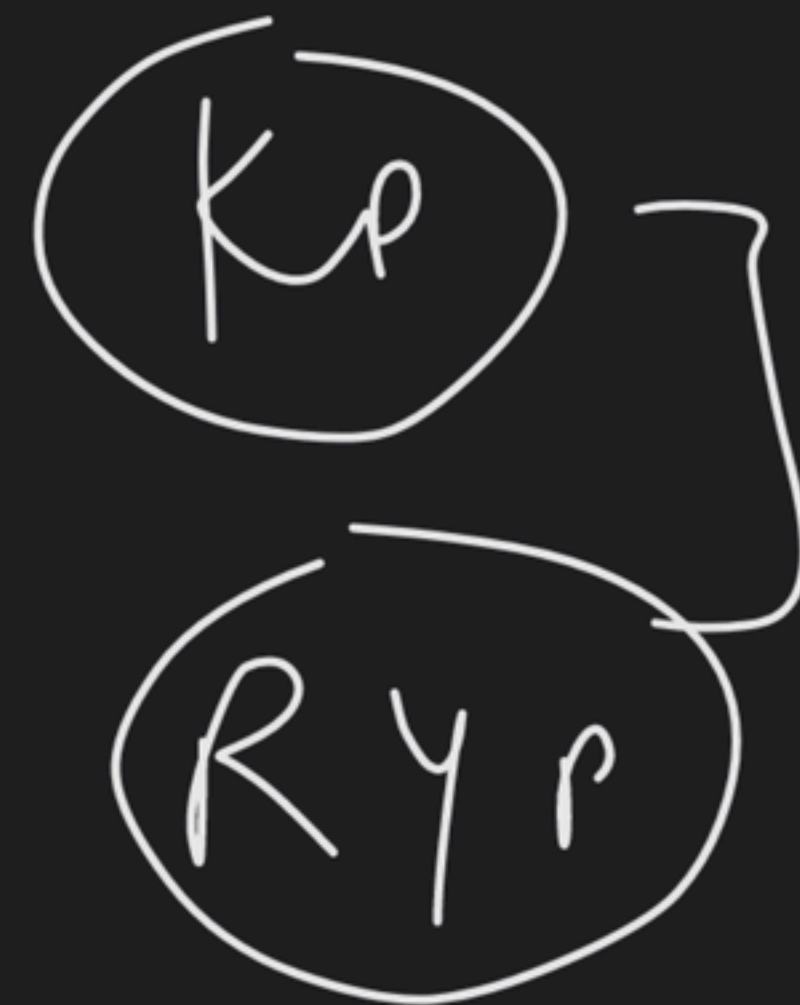
$$\frac{a}{b} - 1 = \frac{c}{d} - 1$$

→

$$\frac{a-b}{\cancel{b}} = \frac{c-d}{\cancel{d}}$$

K_p

R_{yp}



A handwritten diagram consisting of two vertically stacked circles. The top circle contains the text K_p and the bottom circle contains the text R_{yp} . A right-facing curly bracket connects the right side of the top circle to the right side of the bottom circle.