

Tasks in graph Models

- 1) * Replace those not appearing icons with something effective in Sidebar (may be with .png files)
also selected button from Sidebar or .svg files
- 2) * Customize LIMS (Project-Screen)
Should remain in active state like highlighted effect.
- 3) * Finetune LIMS will be the exact copy of the classic MRS Dashboard & Project-Screen with those four circles.
- 4) * Let's use that particular Slider in somewhere else (may be in landing page) for projects if it is not suitable ; for now it has to be commented.
- 5) * Thinking of include AI assist box in project-page like



cause it looks like this too much



room available so we can separate this AI box from dialog to separate UI element It will be more useful.

- 6) * Dashboard page with credits graph Deployments At last the functionalities looks like shit, we gotta make some improvements.

21.)

Name

Name your LLM

Description

Add a short description about your LLM.

Instructions

What do you want your LLM to do?
multi line input field

Knowledge

If you upload files here, responses will be generated based on this knowledge as context

① Attach files

Deploy

Preview

Create



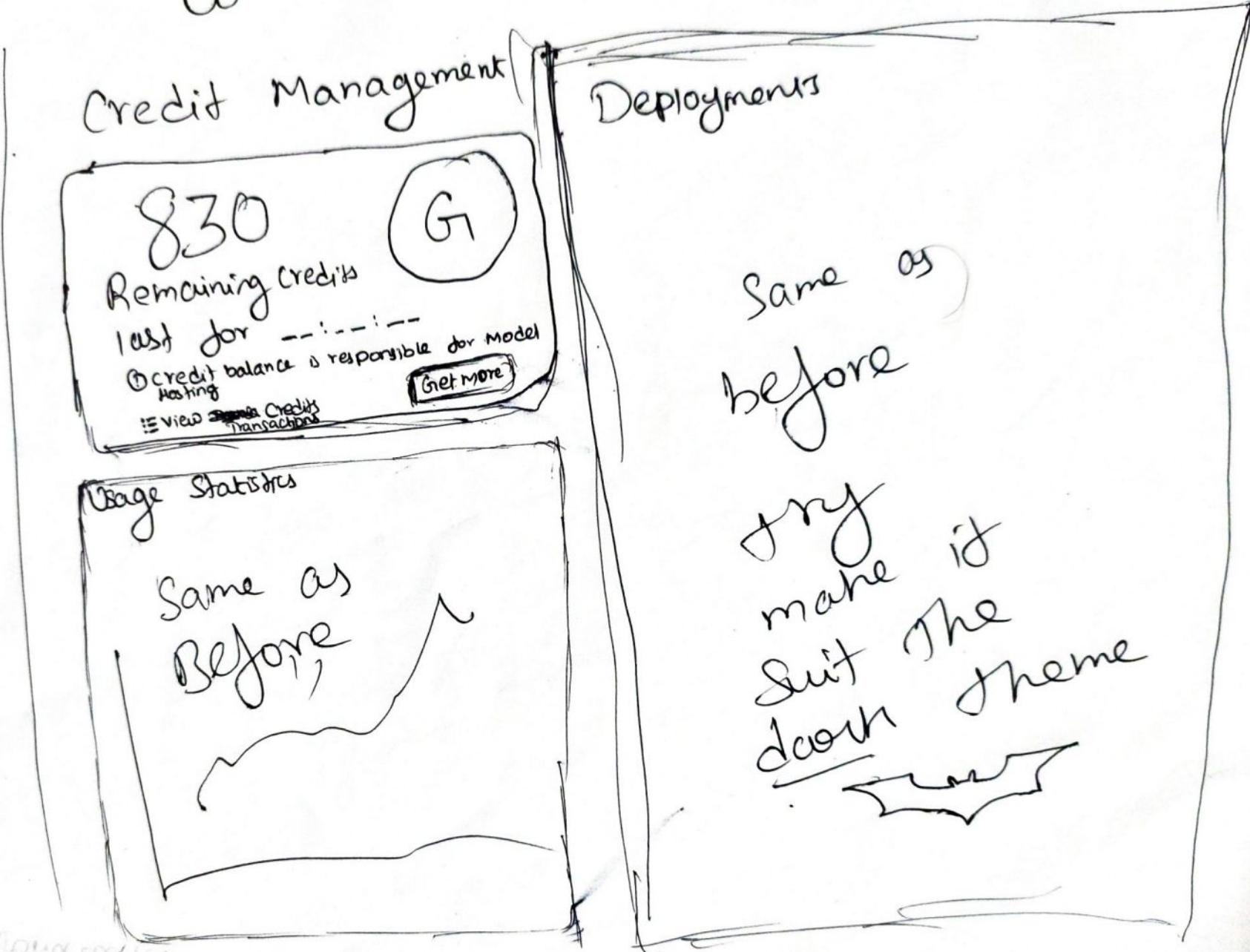
this
screen

component
with
navbar
should
be rendered

when clicked ↑
this chat component will be rendered/replaced
with Deploy dialog forms (Create component ID)

6!) Dashboard suggestion (UI)

Sidebar
as it
is



The original source

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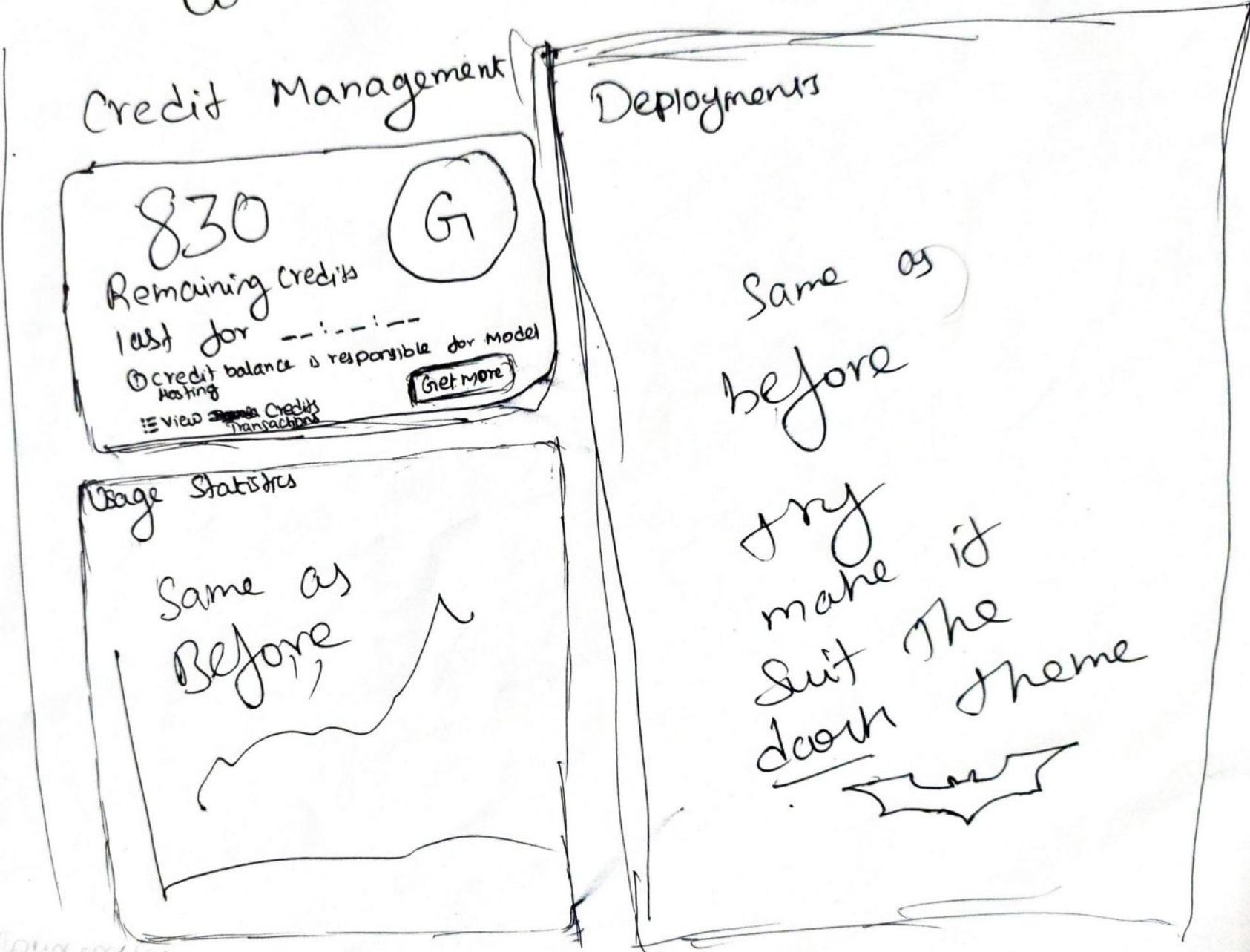
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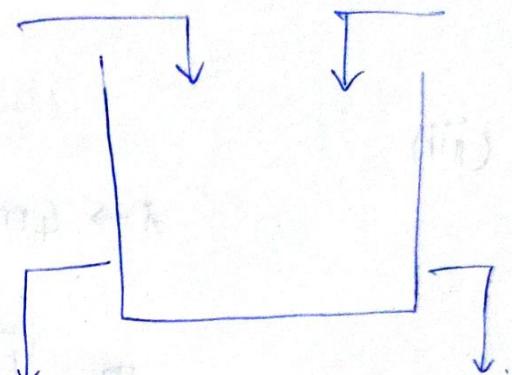
The original source

Terminology :-

Inlet Pipe :- Fill the Tank.

Outlet Pipe :- Empty the Tank.

Cistern :- Liquid stores



Problem :-

Two pipes A & B can fill a Tank in 20 min & 30 min respectively.

- If Both pipes are opened. then Time to fill the Tank.
- If pipe A is opened first after 10 min pipe B is opened. Find Time to open the Tank.
- pipe A is opened for 4 min & then closed, find the Time Taken by B alone. filling the remaining part.

Soln :-

(i) $+ A \rightarrow 20 \text{ m}$ $+ B \rightarrow 30 \text{ m} \Rightarrow 50 \text{ m } (60)$.

$$A+B \rightarrow 5 \text{ l.}$$

$$W = E T.$$

$$T = \frac{W}{E}$$

$$T = \frac{60}{5}$$

$$T = 12 \text{ min}$$

(ii)

$$A \rightarrow 10m \times 3 = 30l.$$

$$= 30l.$$

$$T = \frac{RC}{5} = \frac{30}{5} = 6 \text{ min.}$$

$$\text{Time Taken} = 10 + 6$$

$$= 16 \text{ min.}$$

(iii)

$$A \rightarrow 4m \times 3 = 12l.$$

$$= 12l.$$

$$R = RC = 48l$$

$$T = \frac{RC}{Eff} = \frac{48}{2} = 24 \text{ min}$$

Problem 2:

Pipe A in 20 hrs.

Pipe B empty in 30 hrs.

(i). Time taken to fill cistern if both pipes are opened.

(ii). A is opened first, after 10 hrs. Pipe B is opened. Total time to fill the Tank.

Soln.

(i). $A + (-B) \Rightarrow 3 - 2 = 1 \text{ hr.}$

$T = 60/1 = 60 \text{ min.}$

(ii).

$A \rightarrow 10 \text{ h} \times 3 = 30 \text{ hours.}$

$R_C = 60 - 30 = 30.$

Time = $\frac{30}{1} = 30.$

Problem 3:

Cistern has 3 pipes A, B, C. Pipe A & B can fill it in 5 hrs & 6 hrs

Alternative hours.

A fill in 20 min.

B fill in 30 min.

Pipe A + B are opened on alternative minutes (B is opened first).

$$\begin{array}{l} \text{A} \rightarrow 20 \text{ min} \\ \text{B} \rightarrow 30 \text{ min} \end{array} > \boxed{60 \text{ min}}$$

1st 2nd 3rd ... 1 cycle = 5 l.

3 + 2 + 3 + 2 + 3 ...

$$\begin{array}{l} \text{No. of cycle} = 60 / 5 \\ " = 12 \end{array}$$

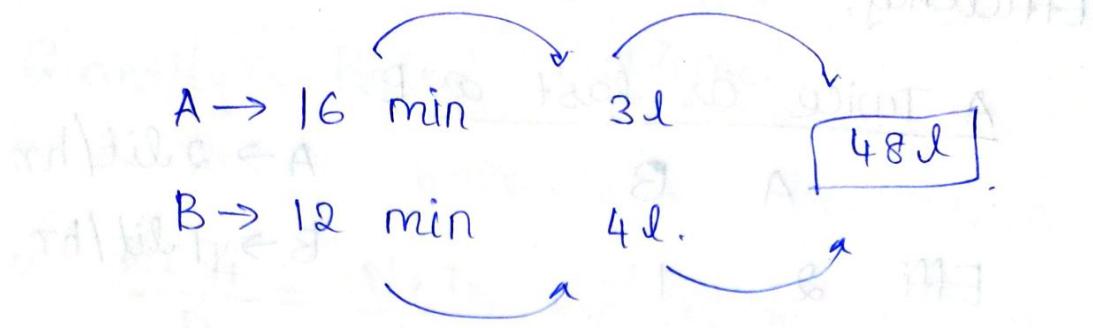
$$1 \text{ cycle} = 1 * 2 = 2 \text{ min.}$$

$$12 \text{ cycle} = 12 * 2 = 24 \text{ min.}$$

Pipe A fill in 16 min
B fill in 12 min.

They opened in alternative mins.

~ Time taken to fill Tank?



1st 2nd 3rd ... 1 cycle = 7 lit.

$A + B + A + B \dots$ No. of cycle = $48/7$

$3 + 4 + 3 + 4 + \dots$ " $\underline{= 6 \text{ cycles}}$

$$6 \text{ cycles} = 6 * 2 = 12 \text{ min}$$

$$\Rightarrow 12 + 1 + \frac{3}{4} = 13 \frac{3}{4} \text{ min}$$

(re) $\xrightarrow{\quad} \times \xrightarrow{\quad} \times \xrightarrow{\quad} \dots$

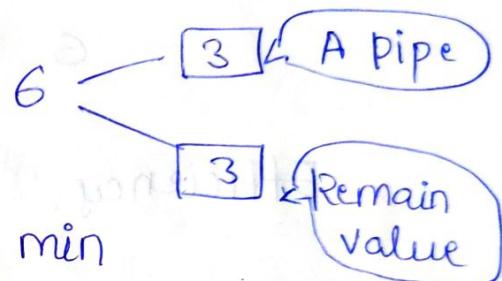
Three pipes A, B & C.

A \rightarrow 12 hours.

B \rightarrow 20 hours.

C \rightarrow 15 hours.

A operated all time. B & C opened alternately.



Efficiency.

A Twice as fast as B.

A B

Effi 2 1

A \rightarrow 2 lit/hr
B \rightarrow 1 lit/hr.

Pipe A is 20% faster than B.

A B

120 : 100

6 : 5

A \rightarrow 6 lit/hr
B \rightarrow 5 lit/hr.

Efficiency.

is directly
proportional
to.

Area
(or)
Radius
(or)

Diameter.

CHAIN RULE.

Quantity Based Problems.

$$\frac{N_1 T_1}{D_1} = \frac{N_2 T_2}{D_2}$$

$N \rightarrow$ Number of pipes.

$T \rightarrow$ Time

$D \rightarrow$ Tank.

$$\frac{44 \times 21}{1} = \frac{55 \times ?}{5} = 84$$

TIME AND WORK.

A can do a piece of work in N days. A's one day work

(i). If A can do a piece of work in 2 days & B can do a piece of work in 5 days. Together to complete the same work

$$A \rightarrow \frac{1}{2}$$

$$B \rightarrow \frac{1}{5}$$

$$(A+B) = \frac{1}{2} + \frac{1}{5}$$

$$= \frac{1 \times 5}{2 \times 5} + \frac{1 \times 2}{5 \times 2}$$

$$\Rightarrow \frac{5+2}{10} = \frac{7}{10}$$

 ,
A can finish a work in 16 days
M " " " " in 7 days.

With the help of N. They did the work in 4 days. Then How many days to complete the work N alone?

PROBLEM 1:-

155, 151, 144, 132, 113 ?

$$\begin{array}{r} 155 - 151 = 4 \\ 151 - 144 = 7 \\ 144 - 132 = 12 \\ 132 - 113 = 19 \\ 113 - ? = 28 \end{array}$$

85

$$113 - 85 = 28$$

PROBLEM 2:-

4, 9, 19, 39, 79, 160, 319. Find out the wrong number in?

PROBLEM 4

7, 28, 63, 124, 215, 342, 511.

$$2^3 = 8 - 1 = 7$$

Wrong one = ?

$$3^3 = 27 - 1 = (26) \times$$

$$4^3 = 64 - 1 = (63)$$

10/

5-1

$$5^3 = 125 - 1 = 124$$

$\Rightarrow 4 (6)$.

$$6^3 = 216 - 1 = 215$$

$\Rightarrow 2 (3-1) (4)$

$$7^3 = 343 - 1 = 342$$

$\Rightarrow 1 (3)$

Speed = 40 km/hr.

Time = 9 hr.

D = ?

$$D = \frac{S \times T}{60}$$

$$D = \frac{40 \times 9}{60}$$

$$D = \frac{360}{60}$$

$$D = 6$$

$$D = 6$$

A city from city B at 5:20 am.

speed = 80 km/hr for 4 hour 15 min.

Two friends started for a place
one by motorcycle & other by car.
speed of motorcycle is 30 km/hr.

$$S = 30 \text{ km/hr}$$

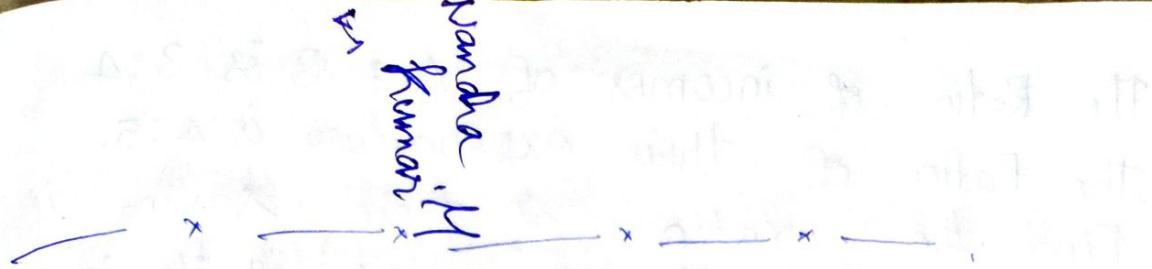
$$\frac{8 \times 15 \times 9}{60}$$

$$\frac{12 \times 5 \times 3}{60} = 3$$

$$\frac{7.5 \times 8 \times 10}{60} = \frac{14.5}{3}$$

$$12 = 1 - 3 = 8$$

Nanda
Kumar



10 km/hr \rightarrow 6 min late

2 km/hr \rightarrow 6 min early

Ans

$$\frac{12 \times 10 \times 12}{2 \times 60} = 12.$$

$$\frac{10 \times 20 \times 8}{4 \times 60} = 80$$

$$\frac{25}{5}^2 \\ \underline{12 \quad 5}$$

a). Thief chased loom

$$200\% \\ \Rightarrow \frac{200}{4 \times 8 \times 5 / 18} \\ \Rightarrow \frac{1600}{20/9}$$

The Ratio of incomes of A & B is 3:4.
The Ratio of their expenditure is 4:5.
Find the ratio of their saving if
the saving of A is $\frac{1}{4}$ of its income.

$$x:y = y:z = z:u \text{ & } x:u = 64:27.$$

$$x:y = y:z = z:u \Rightarrow \frac{x}{y} = \frac{4}{3} \text{ & } \frac{z}{u} = \frac{3}{4}$$

$$= k \times k \times k^3$$

$$= k^3$$

$$\frac{64}{27} = k^3$$

$$k^2 = \frac{16}{9}$$

Ratio of Two Number is 9:5. If 8 is added to Larger number 4 is subtracted from Smaller number.

Seven friends O,P,Q,R,S,T U.

P is \rightarrow U \rightarrow Q

P between T & S.

Q \rightarrow O \leftarrow S

Q $\underset{U}{\leftrightarrow}$ R

~~Diagram~~ $\longrightarrow \times \longrightarrow \times \longrightarrow \times \longrightarrow$
A, B, C, D, E, F, G, H

D shorter than A but taller than Q

E taller than H but shorter than C

B shorter than D but taller than F

C " " G

G is not as tall as F.

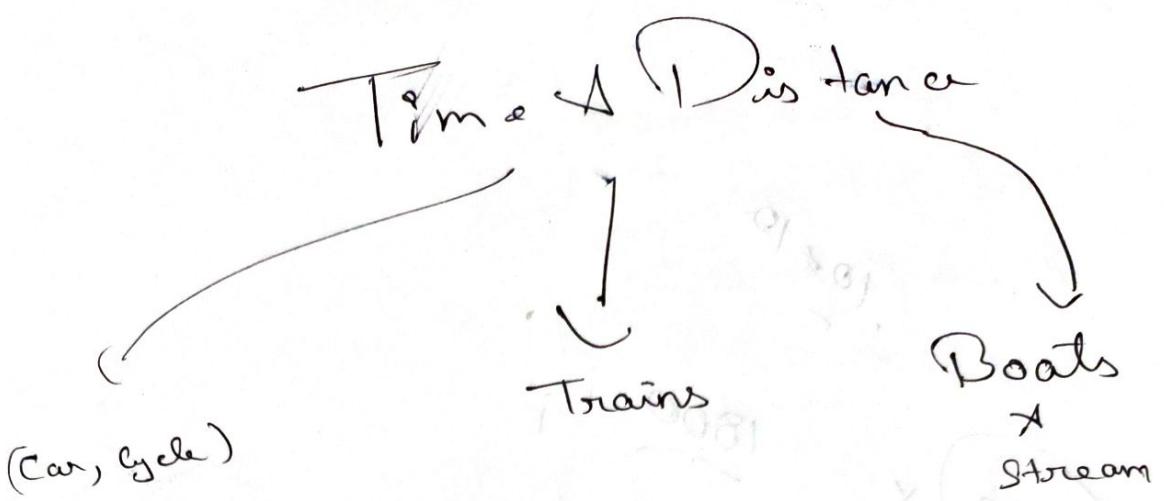
8 \rightarrow E F G H I J K L

3 ladies.

L \leftrightarrow F

L $\underset{q}{\leftrightarrow}$ F

$$18 - \frac{7+8+9+10+11}{5} = \frac{18}{5} \\ = 9$$



Formula :-

$\rightarrow \text{Km/h}$

$$\boxed{\text{Speed} = \frac{\text{Distance}}{\text{Time}}}$$

Time :- $\frac{1}{60}$

$1 \text{ min} \rightarrow 60 \text{ s}$

Distance :-

$$1 \text{ hr} \rightarrow 3600 \text{ sec } (60 \times 60)$$

$$4 \text{ h } 30 \text{ m} \\ \rightarrow 4.50 \text{ hrs}$$

① Distance is

$$1 \text{ Km} = 1000 \text{ m}$$

1000
km 11 Km : 1 m and between what art

Speed :-

$$18/5$$

$$18/5$$

$$\text{m/s}$$

$$5/18$$

$T \times 2 - P$

Note:-

→ Two cars opposite direction
(+ speed)

→ Two cars in same direction

$$(- \text{ speed})$$

Basic / Medium

①

$$v_{bus} = 72 \text{ km/h}$$

The distance covered by bus in 5 sec

$$S = ?$$

$$T = 5 \text{ sec}$$

$$\boxed{D = S \times T}$$

$$= 72 \text{ km/h} \times 5$$

$$= \frac{72}{18} \times 5 \times \frac{5}{18}$$

$$= 100 \text{ m}$$

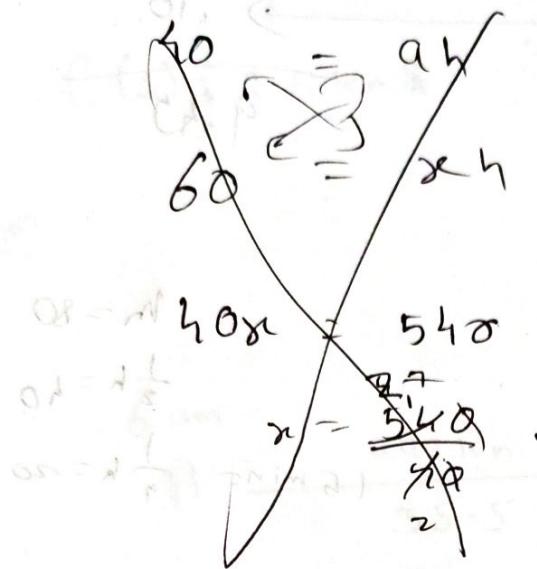
②

$$S = 5 \text{ km/h} \times \frac{5}{18} \text{ m/s}$$

$$T = 15 \times 60$$

$$D = 5 \times \frac{5}{18} \times 15 \text{ min} \times 60$$

$$\boxed{T = 1250}$$



$$10 \text{ Km} \times 6 \text{ h} = 360 \text{ Km}$$

$$s = \frac{d}{t}$$

$$6 \text{ Km/h} \times 6 \text{ h} = 360 \text{ Km}$$

$$\Rightarrow 6 \text{ h} = 2 \times 3 \text{ h}$$

$$\textcircled{1} \quad s = 10 \text{ Km/h}$$

$$\text{rest} = 5 \text{ min/km}$$

~~distance~~

$$s = \frac{d}{t} = \frac{5}{1} \times \frac{25}{10} = 12.5 \text{ h}$$

$$1 \text{ Km} = 10 \text{ Km/h}$$

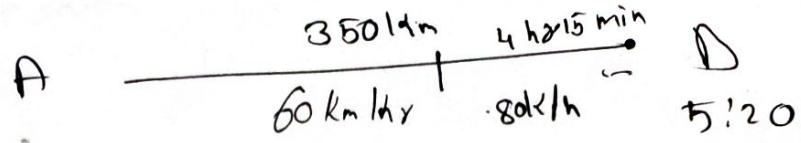
$$30 \text{ min} = 0.5 \text{ Km}$$

$$(\text{rest}) \quad (5 \times 4) = 20$$

$$30 + 20 = 50 \text{ min}$$

5 5 5 5 don't come

⑥



$$\frac{(10 \text{ min})}{60 \text{ min}} = \frac{1}{6} \text{ hour}$$

Total Time taken = ?

~~1 h : 15~~

~~10~~

~~9 : 45~~

~~1 h : 15 min~~

$$1 \text{ h} = 80 \text{ km/h}$$

$$320 + 20 = 340$$

$$80 \text{ km} = 1 \text{ h}$$

$$\frac{1}{2} \text{ h} = 40$$

$$15 \text{ min} = \frac{1}{4} \text{ h} = 20$$

$$\Rightarrow 9 : 45$$

⑦

A boy runs 20 km in 2.5 hr

3 km $2 \times S = ?$ time

Solu

$$\Rightarrow 20S = \frac{D}{T}$$

$$= \frac{20}{2.5} =$$

$$= 8 \text{ km/h}$$

$$\frac{32}{16} = \frac{32}{16} = T$$

$$\frac{32}{16} = 2 \text{ min}$$

Time = 0.25 min

Q) From Prism
Solve

$$M(s) = 30 \text{ km/h} \quad \text{and} \quad T = 6:12 \text{ min}$$

$$C(s) = 24 \text{ km/h}$$

$$\frac{60}{\text{min}} = 30 \text{ km} \quad \frac{12}{60} = \frac{1}{5} \text{ h}$$

$$30 \times 60 = 1800 \text{ m} \quad d = 1800 + 0.2 \times \frac{1}{5} = 1800.4 \text{ m}$$

$$d = 186 \text{ km}$$

$$\frac{186}{24} = 7.75 \quad d = 186$$

~~Solve~~

Q)

$$A \xrightarrow[35.5 \text{ km/h}]{6 \text{ am}} B$$

Q. (T:?)

$$T = 18$$

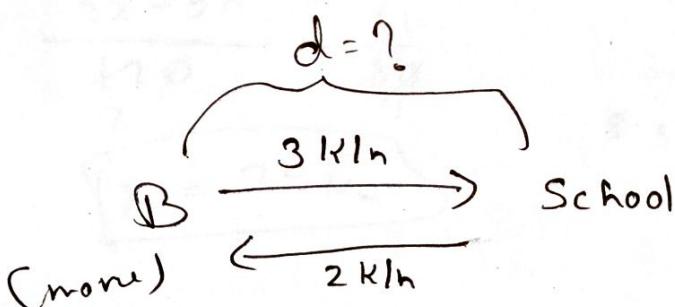
$$T = \frac{18}{35.5}$$

$$12 \text{ hr} + 6 \text{ hr} + 1 \text{ hr} + 20 \text{ min}$$

$$18 + 1:20$$

$$= 19:20$$

Ans

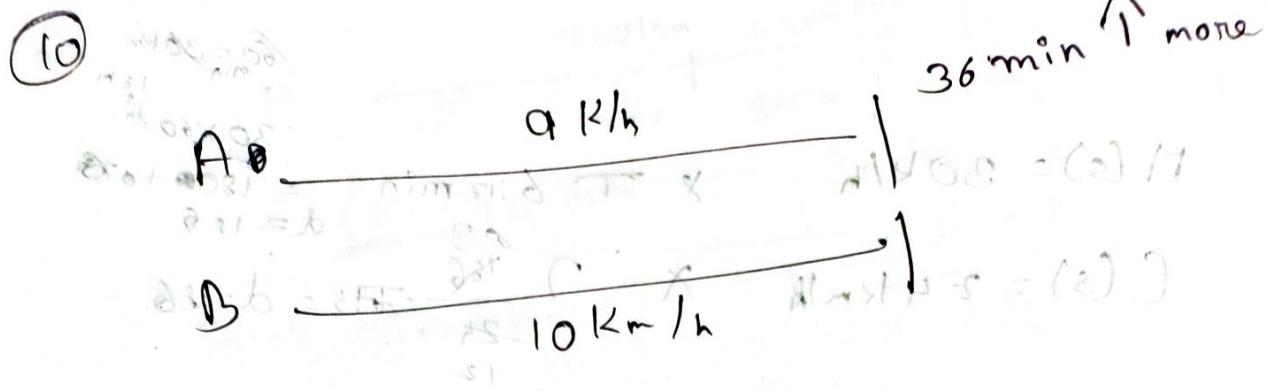


~~Solve~~ $d = ?$

$$t = \frac{d}{s} \quad t = \frac{d}{3} \quad t = \frac{x}{3} \quad t = \frac{x}{3} + \frac{x}{2 \text{ km/h}}$$

$$t = \frac{2x + 3x}{6}$$

$$30 = 5x \quad x = \frac{30}{5} \quad x = 6 \quad \boxed{x = 6} \text{ distan}$$

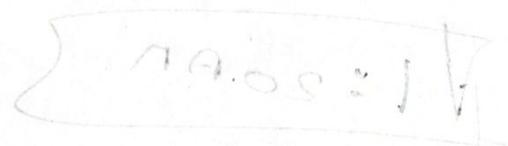


Solu

$T_1 \sim T_2 = 36$ 

$$\frac{d}{a} - \frac{d}{10} = \frac{36}{60}$$

~~fastest front & slowest~~

 $AVGS = 11$



$$\frac{a}{10} + \frac{a}{11} = 36$$

$$\frac{a}{10} + \frac{a}{11} = 36$$

$$a \left(\frac{1}{10} + \frac{1}{11} \right) = 36$$

$$a \left(\frac{11+10}{110} \right) = 36$$

$$a \left(\frac{21}{110} \right) = 36$$

$$a = 36 \times \frac{110}{21}$$

$$a = 36 \times \frac{110}{21}$$

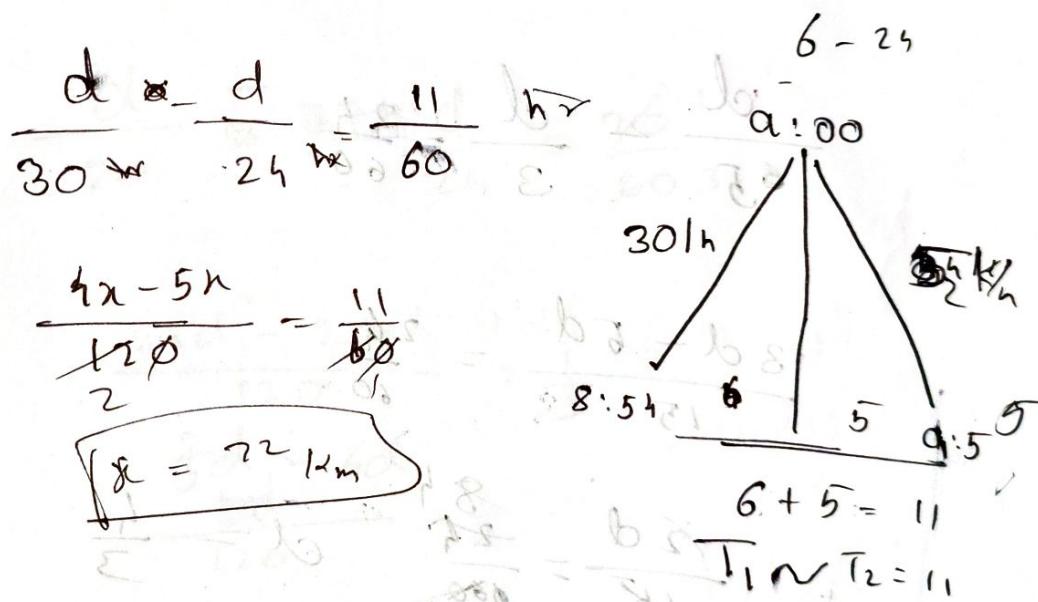
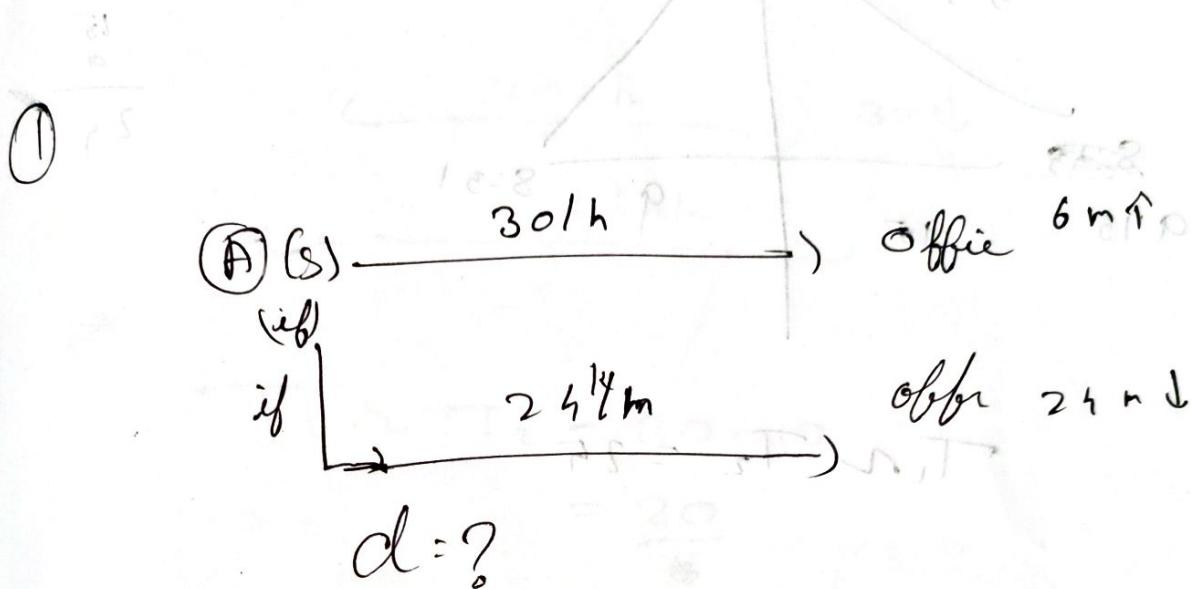
$$a = 36 \times \frac{110}{21}$$

$\frac{a}{10} + \frac{a}{11} = 36$

Take $B = 10$ in the eq

Lesson 3

Late / Early / usual Time



$$d = 60 \text{ s}$$

$$\sum E = 0$$

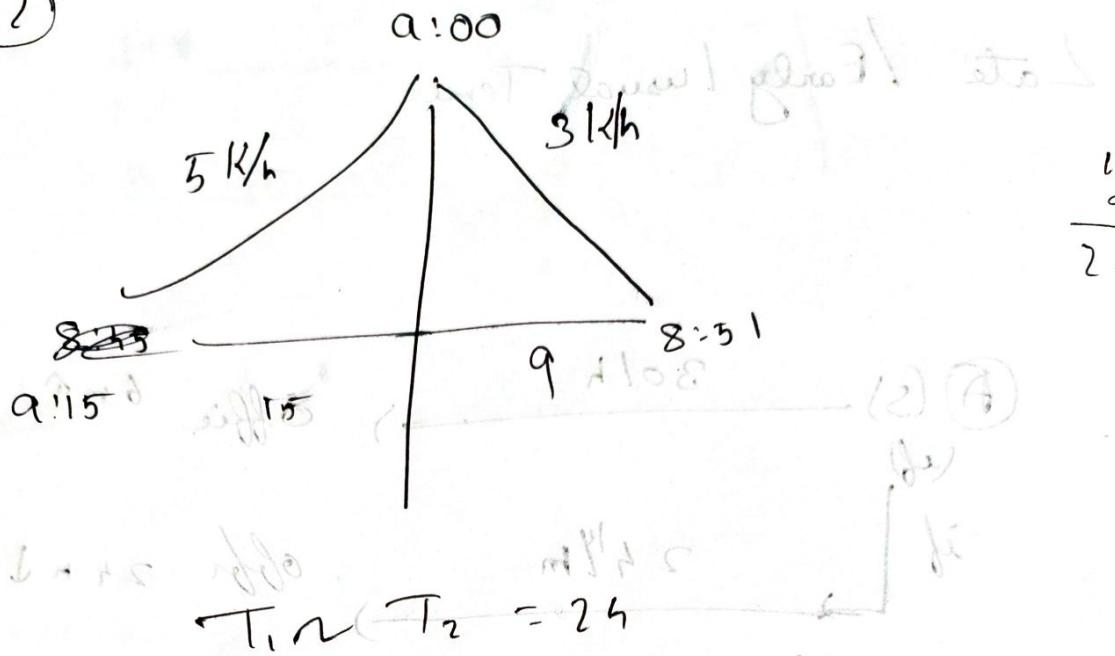
(100)

(12)

$$2x^2 \times 4 = 144$$

(cancel 2 from both sides)

(2)



$$\frac{d}{0.5} - \frac{d}{3} = \frac{24}{60}$$

$$\frac{3d - 5d}{15 \text{ A } 8} = \frac{24}{60}$$

$$\frac{2d}{15 \text{ A } 8} = \frac{24}{60}$$

$$d = \frac{4}{3}$$

$$2d = 6$$

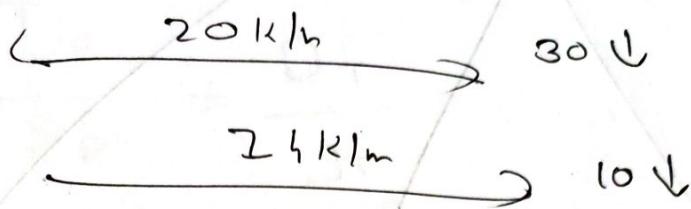
$$D = 3 \text{ km}$$

(ans)

$$D = \frac{D^+ \times s_1 \times s_2}{\sin s_2(s, -s)}$$

Late-Late (Subtract) - 2nd

~~30 min~~



$$T_1 \approx T_2 = 30 - 10$$

$$= \frac{20}{60}$$

$$\frac{d}{20} - \frac{20d}{24} = \frac{20}{60}$$

$$\frac{24d - 20d}{120} = \frac{1}{3}$$

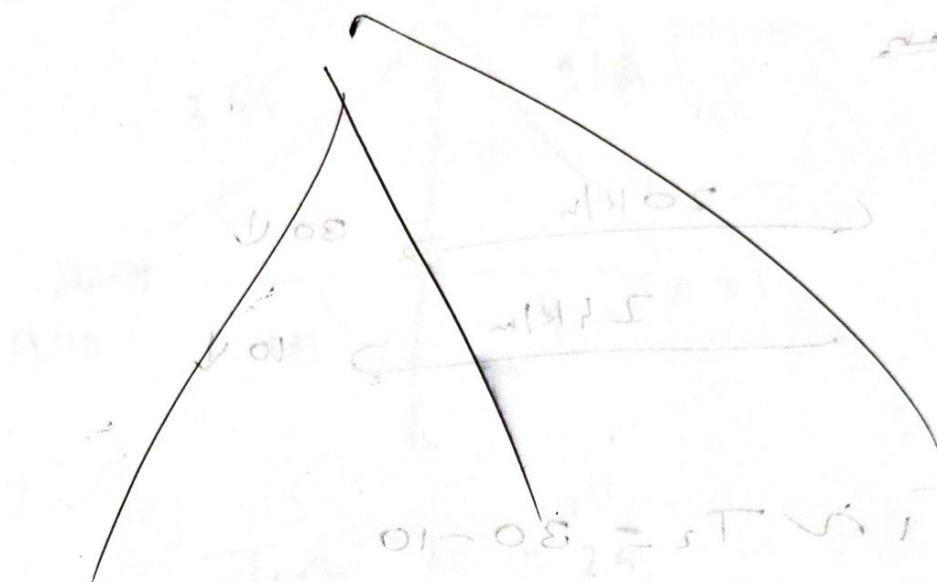
$$\frac{4d}{120} = \frac{1}{3}$$

$$d = \frac{120}{4} = 30$$

(on)

$$= \frac{20 \times 20 \times 24}{60 \times 4}$$

(Chasing:- (Kōdōz) Takide



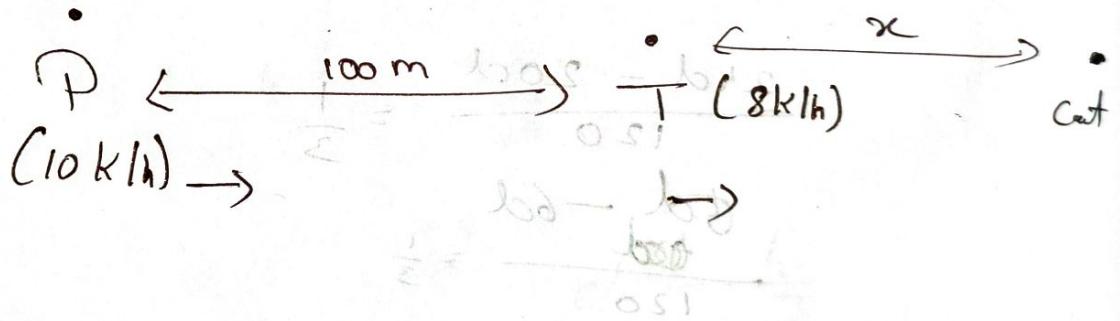
Basic

Equation

Formular

$$D = \Delta D \times \begin{bmatrix} a \\ ab \end{bmatrix}$$

10



$$T = \frac{D}{S}$$

$$D = \begin{matrix} SXT \\ \text{fixos} \end{matrix}$$

$$= 8 \times \frac{100}{2} = 400 \text{ m}$$

Rgualar:

$$T_P = T_T$$

(A) \rightarrow P

(A) \rightarrow T

$$= \frac{D_P}{S_P} = \frac{D_T}{S_T}$$

$$= \frac{100+x}{10 \text{ kN}} = \frac{x}{8 \text{ kN}}$$

$$= 100+x = \frac{10x}{8}$$

$$= 800 + 8x = 10x$$

$$= 800 = 2x$$

$$x = 400$$

②

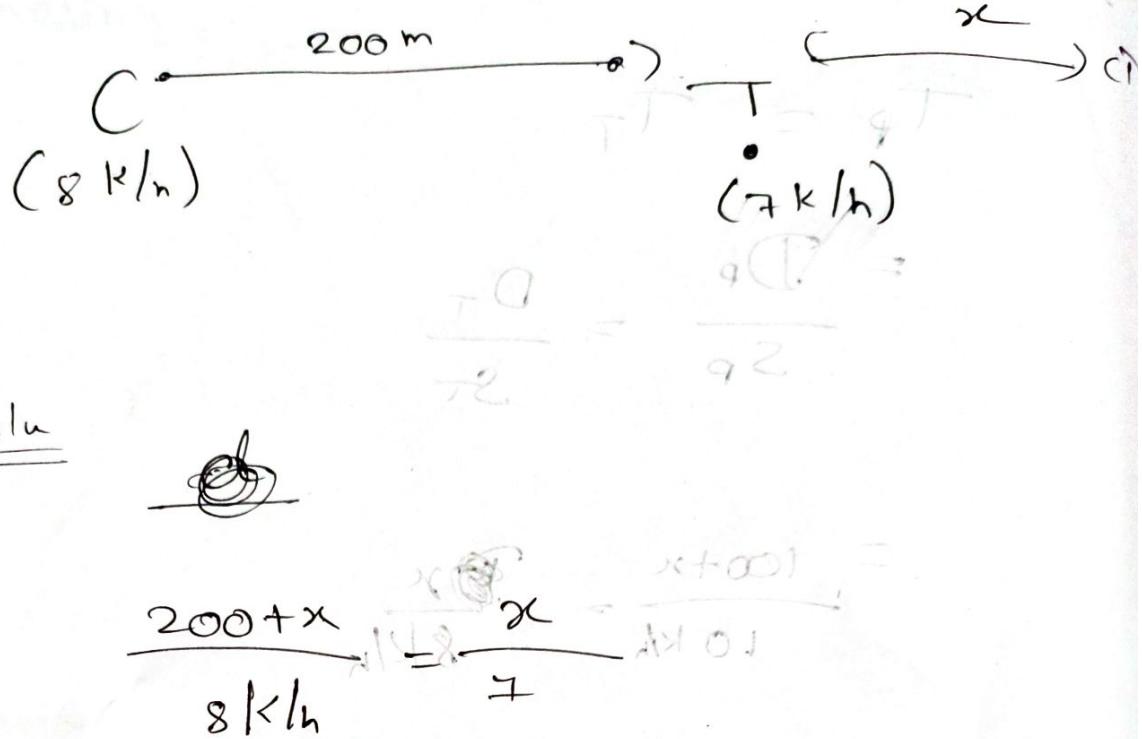
$$\cancel{T_P} = T_T$$

$$\frac{100+x}{5 \text{ kN}} = \frac{x}{4 \text{ kN}}$$

$$400 + 4x = 5x$$

$$400 = x$$

③



Solu

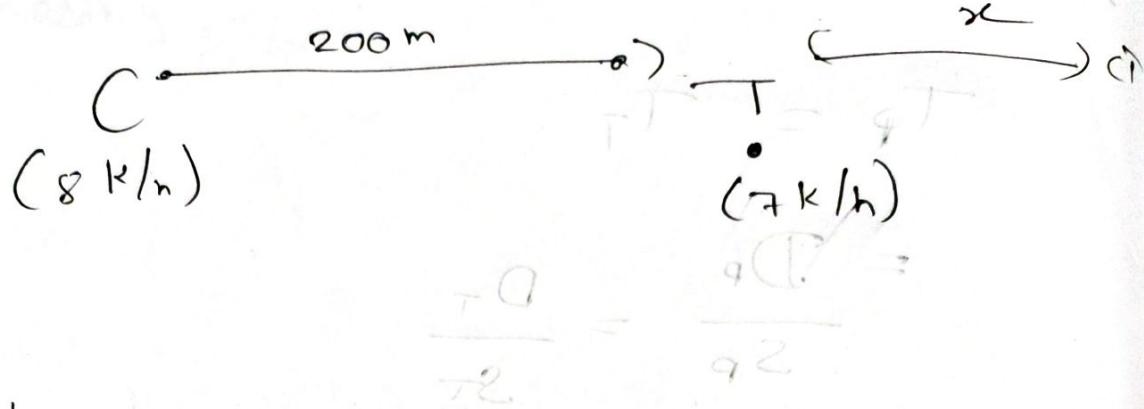
$$\frac{200+x}{8 \text{ kN}} = \frac{x}{7} = \frac{x+001}{10 \text{ kN}}$$
$$\Rightarrow 1400 + 7x = 8x$$
$$1400 = 8x - 7x$$
$$1400 = x$$
$$\frac{1400}{\text{kN/h}} = 140 \text{ h}^{-1}$$

$$T = \frac{D_0}{S} = \frac{200}{1} = 200 \text{ N}$$
$$T = \sqrt{18}$$

$$\frac{200}{8 \text{ kN}} = \frac{x+001}{7 \text{ kN}}$$

$$200 = 8x + 700$$
$$200 - 700 = 8x$$
$$-500 = 8x$$
$$-62.5 = x$$

③

Solu

$$\frac{200+x}{8 \text{ km/h}} = \frac{x}{7}$$

$$\Rightarrow 1400 + 7x = 8x$$

$$\Rightarrow 1400 = x$$

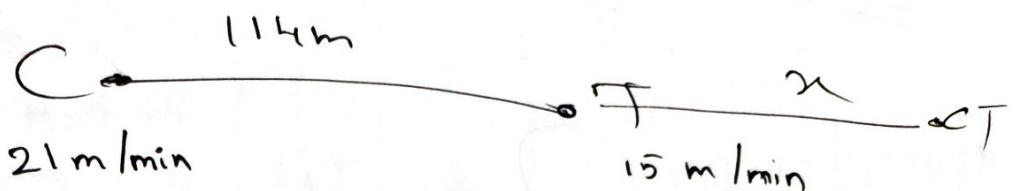
km/h

$$T = \frac{D}{S} = \frac{200}{1400} = \frac{1}{7} \text{ hours}$$

$$\frac{200}{8} = \frac{x+100}{7}$$

$$25 = x + 100$$

5



$$\frac{114 + x}{21} = \frac{x}{15}$$
$$\frac{114}{21} + \frac{x}{21} = \frac{x}{15}$$
$$5.43 + \frac{x}{21} = \frac{x}{15}$$
$$5.43 = \frac{x}{15} - \frac{x}{21}$$
$$5.43 = \frac{1}{105}x$$
$$x = 543 \times 105$$
$$x = 5700$$

Formular

$$T = \frac{\Delta D \times a}{\rho g b}$$
$$= 114 \times \frac{21}{6} (s_1 - s_2)$$

= 399 streaks

$$T = \frac{399}{21}$$
$$\approx 18 \text{ min}$$

Time + Work :-

Time & Work
Chain Rule :-

$$\text{Formula 1: } \frac{\frac{P_1 H_1 D_1}{W_1}}{\frac{P_2 H_2 D_2}{W_2}} = \frac{W_1}{W_2}$$

Formula 2 :-

$$P_1 H_1 D_1 = P_2 H_2 D_2$$

P = No. of Person

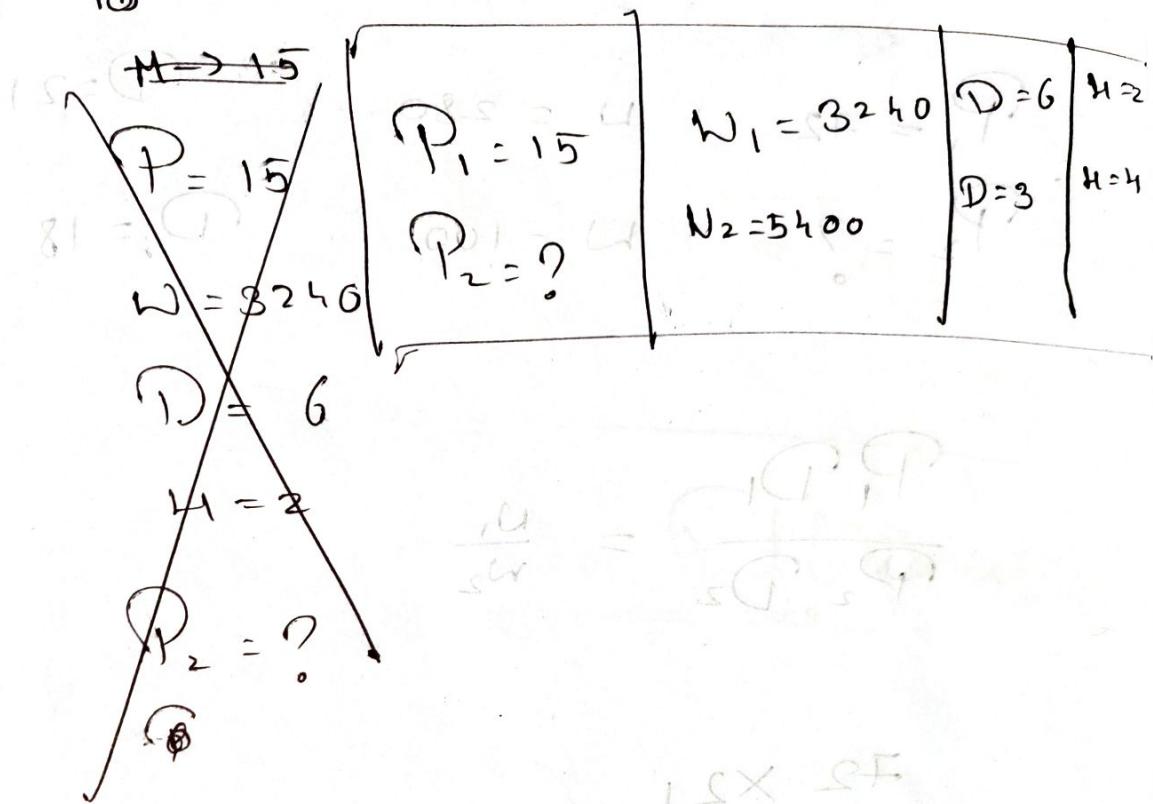
H = No. of Hours

D = No. of Days

W = Work

①

to



$$\frac{W_1}{W_2} = \frac{P_1 H_1 D_1}{P_2 H_2 D_2} = \frac{15 \times 15 \times 6^2}{x \times 4 \times 2^2} = \frac{3240}{\frac{5400}{270}}$$

$$\frac{15 \times 15 \times 6^2}{x \times 2^2} = \frac{3240}{5400}$$

$$\frac{15}{x} = \frac{3240}{5400}$$

$$x = 25$$

Ansatz P₁, H₁, P₂, H₂

②

if

$$\begin{array}{l} P_1 = 72 \text{ m} \\ P_2 = ? \end{array} \quad \begin{array}{l} n = 280 \\ n = 100 \end{array} \quad \begin{array}{l} D = 21 \\ D = 18 \end{array}$$

$$\frac{P_1 D_1}{P_2 D_2} = \frac{n_1}{n_2}$$

$$\frac{72 \times 21}{n \times 18} = \frac{280}{100}$$

③

$$P_1 = 39 \quad D = 12, H = 5$$

$$P_2 = 30 \quad D = ? \quad n = 6$$

~~base~~ \rightarrow Formula 2.

$$P_1 H_1 D_1 = P_2 H_2 D_2$$

$$13 \\ 8x \times 12 \times 6 = \frac{1}{30 \times n \times 6}$$

$$(8x) - 13 = 0 \\ x = 13$$

Based On Efficiency

①

$$A + B = 12 \text{ days}$$

$$B + C = 15 \text{ days}$$

$$A + B = \frac{1}{12}$$

$$B + C = \frac{1}{15}$$

$$A - C = \frac{1}{12} - \frac{1}{15}$$

$$A - C = \frac{1}{60}$$

$$\frac{1}{x} - \frac{1}{2x} = \frac{1}{60}$$

$$x = 30$$

Solu

$$A + B = \frac{1}{12} \quad \text{--- } ①$$

$$B + C = \frac{1}{15} \quad \text{--- } ②$$

efficiency

$$A = 30 \text{ days}$$

$$B = 60 \text{ days}$$

Sub A in ①

$$\frac{1}{30} + B = \frac{1}{12}$$

$$B = \frac{1}{2} - \frac{1}{30} = \frac{1}{15} = 60$$

②

$$A + B = 7 \text{ days}$$

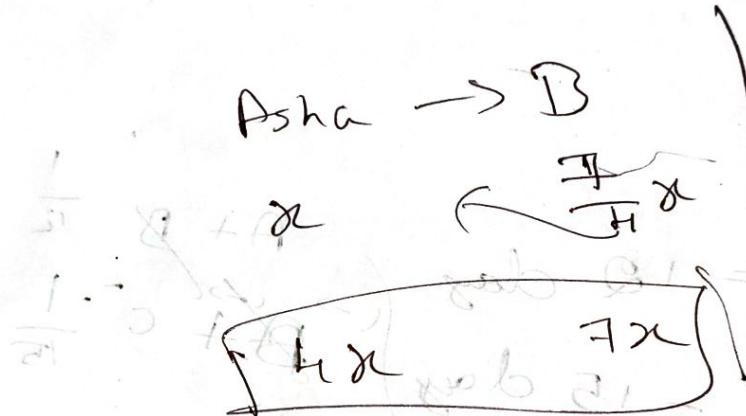
$$\text{asha} \rightarrow \frac{1}{4} \left(\frac{3}{4} \right) \text{Babu} \left(\frac{7}{4} x \right)$$

$\frac{3}{4} \times \frac{7}{4} = \frac{21}{16}$

Solu

$$A_s + b. = \frac{1}{7} \text{ day}$$

working effect basic?



$$2x \times 2 =$$

$$4 \times 4 = 16$$

$$A = 4x$$

$$2x \times \frac{11}{16}$$

$$= 11 \text{ day}$$

$$4x + 7x = \frac{1}{7}$$

$$\frac{1}{0.7} = 1 - 4$$

$$\frac{1}{0.7} = \frac{1}{x} - \frac{1}{7x} \quad \frac{1}{4x} + \frac{1}{7x} = \frac{1}{7}$$

$$= \frac{11}{28x} = \frac{1}{7x}$$

$$11 = 28x \quad \frac{11}{28} = \frac{1}{x}$$

$$x = \frac{1}{11} = \frac{1}{28}$$

$$x = \frac{1}{11} = \frac{1}{28}$$

③ A \rightarrow 20 days (140%)

B \rightarrow 20% ↑ after (100%)

Solu

$$\frac{2x}{140} = \frac{x}{100}$$
$$100x = 2x$$

$$2x = 60$$
$$x = 30$$

∴ x = 50

B = 50 days

④

A \rightarrow more time $\frac{50\% \uparrow \text{of } B}{50\% \uparrow \text{of } A} \Rightarrow 150\%$

A + B = 18 days

Solu

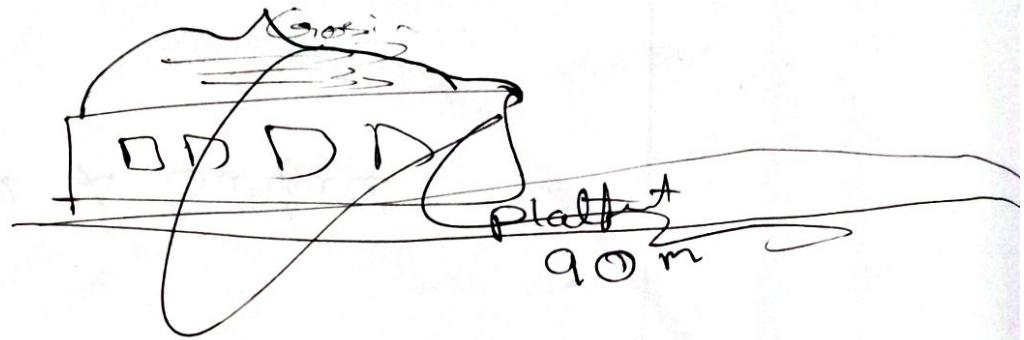
$$\frac{A}{x+50\% \text{ of } x} + \frac{B}{x} = 18$$

$$x + \frac{1}{2}x = \frac{x}{x+50\% \text{ of } x}$$

$$\frac{\frac{3x}{2}}{2} = \frac{x}{x+50\% \text{ of } x}$$
$$3x = 2x$$

ZoHo Question:-

①



150 m
Train (72 Km/h)

1 m 90 m Platform

Gross time : ?

Soluⁿ

Platform + Train length

Cheek Unit

$$= 90 + 150$$

$$\Rightarrow 240 \text{ m}$$

$$S @ T = \frac{d}{S} = \frac{240}{\frac{72 \times 1000}{36 \times 25}} =$$

~~631~~
~~7269~~
~~240~~
~~72~~ ~~50~~
~~36~~ ~~25~~
~~12~~

$$S = \frac{d}{T}$$

$$= \frac{125}{12} = \frac{50}{25} = \frac{800}{300}$$

$$= 300 \text{ mins } 1 \text{ sec.}$$

$$T = \frac{d}{S}$$

$$T = \frac{120}{240}$$

$$\begin{array}{r} 92 \\ \times 22 \\ \hline 184 \end{array}$$

Nov 21 C.A.

181

15

T = 12 sec

②

$$S = 54 \text{ km/h}$$

Inclined slope stoppage = 45 Km/5

Solve

$$54 - 45 = \text{Stoping time} \\ = 9 \text{ Km}$$

$$\frac{\text{Speed}}{\text{Distance}} = \frac{5 \text{ km/h}}{1 \text{ h}}$$

三

$$\frac{d}{s} = \frac{q}{54}$$

$$BE = \frac{1}{6} h$$

$$d = \frac{1}{x} \times 60 \text{ min}$$

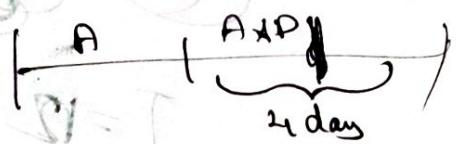
$d_{\text{sta}} = 10 \text{ mm}$

③

A \rightarrow 15 days

P \rightarrow 30 days

Work done alone: ?



Solu

$$A + P = \frac{1}{15} + \frac{1}{30}$$

$$= \frac{2+1}{30}$$

$$A + P = \frac{3}{30} = \frac{1}{10}$$

$$\cancel{A+P} = 10 \text{ days}$$

Work = x

$$AS = \frac{x}{15}$$

Alone days y

$$PS = \frac{x}{30}$$

$$\left(\frac{x}{15} \times y \right) + \left(\frac{x}{15} \times 4 + \cancel{\left(\frac{x}{30} \times 4 \right)} \right) = x$$

$$\frac{y}{15} + \left(\frac{4}{15} + \frac{4}{30} \right) = 1$$

$$\frac{2y + 8 + 4}{30} = 1$$

$$\frac{2y + 12}{30} = 1$$

$$2y + 12 = 30$$

$$2y = 30 - 12$$

$$2y = 18$$

$$y = \cancel{18} \frac{18}{2}$$

$$y = 9$$

9 days

(4)

$$C_1 \text{ (Thick candle)} = 6h$$

$$C_2 \text{ (Thin candle)} = 2h \text{ less} = 4h$$

Solu

$$\text{length} - x = \left(\frac{1}{6} + \frac{1}{4} \right) + \frac{C}{x}$$

$$S = \frac{D}{T} \quad S_T = \frac{x}{n}$$

$$C_1 = \frac{x}{6}$$

$$C_2 = \frac{x}{4}$$

burn rate

OE = side PS

shoe PS

$$C_1 = 2 \text{ thin}$$

$$y \times \frac{x}{6}$$

$$y \times \frac{x}{4}$$

$$\frac{1}{6} + \frac{1}{4} = C$$

prob P

$$\left(x - \frac{xy}{6} \right) = 2 \left(x - \frac{xy}{4} \right)$$

$$\left(1 - \frac{y}{6} \right) = 2 \left(1 - \frac{y}{4} \right)$$

$$\frac{6-y}{6} = \frac{1-y}{2}$$

$$\frac{6-y}{6} = \frac{4-y}{2}$$

$$94 - 4y = 48 - 12y$$

$$8y = 24$$

~~$$1y = 3$$~~

(5)

$$\frac{(P-K)}{S} = \frac{(C-S)}{S}$$

~~Do you know?~~

$$N_a = \text{Capital} = 1,85000$$

$$N_a = \frac{(P-S)}{S} = \frac{(C-S)}{S}$$

$$N_i = 225,000 \%$$

$$N_i \text{ Profit} = 9000 \%$$

$$\text{Total Profit} = ?$$

Solve

$$\text{Total Cap} = 1,85000$$

$$\begin{array}{r} 37 \\ \cdot 185 \\ \hline 225 \\ \cdot 45 \end{array}$$

5% of 100

$$\frac{5}{100} \times 100 = 50\%$$

$$T.C = \frac{410000}{100}$$

$$37:45$$

What is N_i % in Total

$$225,000 \% \text{ in } 410000$$

$$\begin{array}{r} 82 \\ \cdot 45 \\ \hline 37 \\ \cdot 45 \end{array}$$

$$\frac{225000}{100} \times 410000$$

$$\begin{array}{r} 54.87 \\ \cdot 45.12 \\ \hline 25.12 \end{array}$$

$$54.87 \approx 55$$

$$55 \approx 9000$$

$$100 = x$$

$$47 \times 9000$$

$$54$$

$$100$$

$$\frac{2,25000}{40,000} \times 8 = 4500$$

Ans = 92



Q. If a boat goes upstream

Still water = 5 Km/h

Stream flow = 3 Km/h

$T = 10 \text{ hrs}$ (upstream)

Soln:-

Note:-

Same direction :-
Speed of person + Speed of water

Opp direction :-

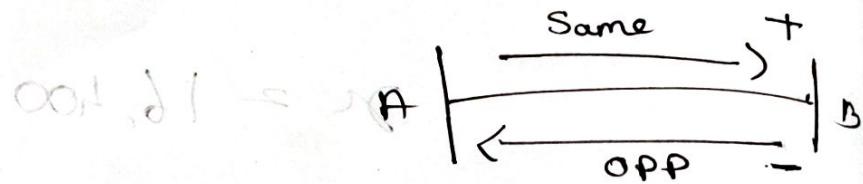
Speed of person -

Speed of water $\frac{9}{100} \text{ km/h}$

Solu

$$S_B = 5 \text{ km/h}$$

$$S_R = 3 \text{ km/h}$$



$$\text{up} + \text{down} \text{ of } 10 \text{ h} = T$$

$$\underline{\text{up}} \rightarrow \text{up dist} = \text{total dist} / 2.$$

$$\Rightarrow S_B + S_R = 8 \text{ km/h}$$

$$\boxed{T_{\text{up}} + T_{\text{down}} = 10}$$

$$x = \text{distancia}$$

$$\frac{x}{S_B + S_R} + \frac{x}{S_B - S_R} = 10$$

$$\frac{x}{8} + \frac{x}{2} = 10 \quad \text{Total dist} \\ \text{Total dist} = 16$$

$$\frac{x+4x}{8} = 10 \quad \boxed{5x = 80}$$

$$\frac{5x}{8} = 10 \quad 5x = 80 \quad x = \frac{80}{5}$$

⑦

$$4 \text{ men} \times 6 \text{ women} = 8 \text{ days}$$

$$3M + 7W = 10 \text{ days}$$

$$10 \text{ women} = ? \text{ days}$$

Solu

$$1 \text{ Men} = x \text{ (work)}$$

$$1 \text{ woman} = y \text{ (work)}$$

$$4x + 6y = \frac{1}{8} \quad \text{--- ①}$$

$$\begin{array}{r} - \\ 3x + 7y = \frac{1}{10} \end{array} \quad \text{--- ②}$$

$$x - y = \frac{1}{8} - \frac{1}{10}$$

$$x - y = \frac{1}{40}$$

$$x = \frac{1}{40} + y$$

Sub x in ①

$$\textcircled{1} \quad \left(\frac{1}{40} + y \right) + 6y = \frac{1}{8}$$

$$\frac{1}{40} + y + 6y = \frac{1}{8}$$

$$10y = \frac{1}{8} - \frac{1}{40}$$

$$10y = \frac{18}{80} - \frac{1}{40}$$

$$\textcircled{2} \quad \text{Women} = \frac{1}{40} \times 7600 = \text{removed women}$$

$$\text{removed} = 65 + 148$$

100 \rightarrow 40 days

removed = removed

(8)

$$C_1 = 25\% \text{ vote}$$

$$C_2 = ? \quad (\text{Ans}) - 28 = \text{net}$$

$$\text{Invited} = 30\% \quad C = \text{removed}$$

$$\text{Total Vote} = 7600$$

$$\rightarrow \text{Removed } 30\% \text{ of } 7600$$

or

$$\text{What is } 70\% \text{ of } 7600$$

$$= \frac{70}{100} \times 7600$$

$$\text{or} = C - x$$

$$\text{T.VN} = 5320$$

$$C + \frac{1}{5} = 266$$

$$C_1 = 25\% \text{ of } 5320$$

$$\frac{1}{4} - \frac{1}{5} = \frac{1}{20}$$

$$\frac{1}{20} \times 5320$$

$$C_1 = 2330$$

$$\sqrt{C_2 = 37010}$$

(51)

$$C_1 = 25\%$$

$$6 \rightarrow C_2 = 75\%$$

$$\Rightarrow \frac{15}{75} \times 532 \cancel{\times 100}$$

$$= \frac{15}{75} \times 532$$

$$\begin{array}{r} 266 \\ 15 \\ \hline 1330 \\ 266 \\ \hline 3990 \end{array}$$

$$C_2 = 3990$$

$$\begin{array}{r} 532 \\ 15 \\ \hline 2560 \\ 532 \\ \hline 80 \end{array}$$

@

$$A \rightarrow 35\%$$

$$T = 120 \text{ kg}$$

→ Invalid $\approx 15\%$

$$\begin{array}{r} 28 \\ 13 \\ \hline 84 \\ 28 \\ \hline 364 \\ 364 \\ \hline 0 \end{array}$$

Solu

$$\text{Needed} = 85\%$$

$$\frac{17}{85} \times 120$$

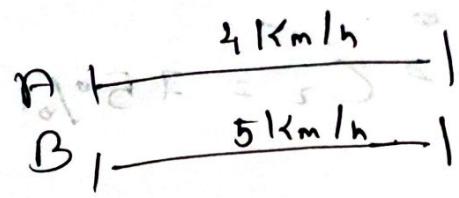
$$\begin{array}{r} 35 \\ 14 \\ \hline 10 \\ 40 \\ \hline 112 \end{array}$$

$$35 - \frac{100}{35}$$

$$85 \Rightarrow 102 \text{ kg} \quad \% \text{ used}$$

$$\therefore 65\% \text{ of } 112 \Rightarrow \frac{65}{100} \times 112 \Rightarrow \frac{13 \times 28}{5}$$

10)



bus + 20

30 mins gap
Second

Solu

distance = x

$$\frac{x}{4} - \frac{x}{5} = \frac{30}{60}$$

$$\frac{5x - 4x}{20} \Rightarrow \frac{x}{20} = \frac{1}{2} \quad \frac{x}{20} = 30$$

$$x = 500$$

11)

Train + Car

Train P → 60 Km/h

Car F → 80 Km/h

① Car slow down 2 hrs:

Solu :-

Lets ~~the~~ distance = x

$$\frac{x}{60} - \frac{x}{80} = 2$$

$$\frac{3x - 4x}{240} = \frac{x}{240} = 2$$

$$= \boxed{x = 480}$$

Probability :-

R → 5

B → 4

Q → 3

Toys

Solu Total Toys = 12

- if 3 picked, what is Probability that at least 1 is blue.

$$1 - \frac{14}{55} \Rightarrow \frac{55}{55}$$

∴ find No blue :-

$$1^{\text{st}} = \frac{8}{12}$$

$$2^{\text{nd}} = \frac{7}{11}$$

$$3^{\text{rd}} = \frac{6}{10}$$

$$\frac{8}{12} \times \frac{7}{11} \times \frac{6}{10} = \frac{14}{55}$$

$$\boxed{\text{No blue} \Rightarrow \frac{14}{55}}$$

②

Red \rightarrow 6

Blue \rightarrow 5

Green \rightarrow 4

at least One green ?

2 Marbles taken

Solu:

$$\text{Total} = 15$$

No green :-

$$1^{\text{st}} = \frac{11}{15}$$

$$2^{\text{nd}} = \frac{10}{14}$$

Left Marbles \rightarrow 10

$$\Rightarrow \frac{11}{15} \times \frac{10}{14} \text{ } \boxed{\text{No green}} \quad \frac{10}{21}$$

Left Marbles \rightarrow 7

$$1 - \frac{10}{21} \Rightarrow \frac{11}{21} \times \frac{1}{7} = \frac{11}{147}$$

$\frac{11}{147}$ is the Probability

Ratio of Proposition

①

$$\frac{1}{3} M = \frac{1}{2} E + 30 \quad \text{--- ②}$$

$$E + M = 240 \quad \text{--- ①}$$

$$\underline{M = 240 - E} \quad 2E + 2 = T$$

$$\frac{1}{3}(240 - E) = \frac{1}{2}E + 30$$

$$\frac{240}{3} - \frac{E}{3} = \frac{E}{2} + 30$$

$$\frac{240}{3} - 30 = \frac{E}{2} + \frac{E}{3}$$

$$\frac{240 - 90}{3} = \frac{3E + 2E}{6}$$

$$\frac{50}{3} = \frac{5E}{6}$$

$$50 = \frac{5E}{6}$$

$$300 = 5E$$

$$E = \frac{300}{5} \boxed{E = 60}$$

②

~~(1) + 5 = 28~~
T's age is 5 years more than twice the sister age

$$③ - 0.8 + 3\frac{1}{2} = 11 \frac{1}{2}$$

Solu

$$T + S = 35 \quad \text{--- } ①$$

$$① - 0.8 = 11 \frac{1}{2}$$

$$T = 5 + 2 \times S \quad \text{--- } ②$$

$$5 + 2S + S = 35 \quad 0.8 + 3\frac{1}{2} = (2 - 0.8) \frac{1}{2}$$

$$5 + 3S = 35$$

$$3S = \underline{35} - 5$$

$$S = \frac{\underline{30}}{3}$$

$$\sqrt{S = 10}$$

$$\begin{array}{r} 0.8 \\ 0.8 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 28 + 38 \\ \hline 66 \end{array} \quad \begin{array}{r} 0.8 \\ 0.8 \\ \hline 0.8 \end{array}$$

$$\begin{array}{r} 10 \\ 10 \\ \hline 0 \end{array} \quad \begin{array}{r} 0.8 \\ 0.8 \\ \hline 0.8 \end{array}$$

$$\boxed{10 = 2 \times 5 = 10 \text{ years}}$$

Tasks in graph Models

- 1) * Replace those not appearing icons with something effective in Sidebar (may be with .png files)
also selected button from Sidebar or .svg files
- 2) * Customize LIMS (Project-Screen)
Should remain in active state like highlighted effect.
- 3) * Finetune LIMS will be the exact copy of the classic MRS Dashboard & Project-Screen with those four circles.
- 4) * Let's use that particular Slider in somewhere else (may be in landing page) for projects if it is not suitable ; for now it has to be commented.

- 5) * Thinking of include AI assist box in project-page like



cause it looks like this too much



room available so we can separate this AI box from dialog to separate UI element It will be more useful.

- 6) * Dashboard page with credits graph Deployments At last the functionalities looks like shit, we gotta make some improvements.

21.)

Name

Name your LLM

Description

Add a short description about your LLM.

Instructions

What do you want your LLM to do?
multi line input field

Knowledge

If you upload files here, responses will be generated based on this knowledge as context

① Attach files

Deploy

Preview

Create



✓ this

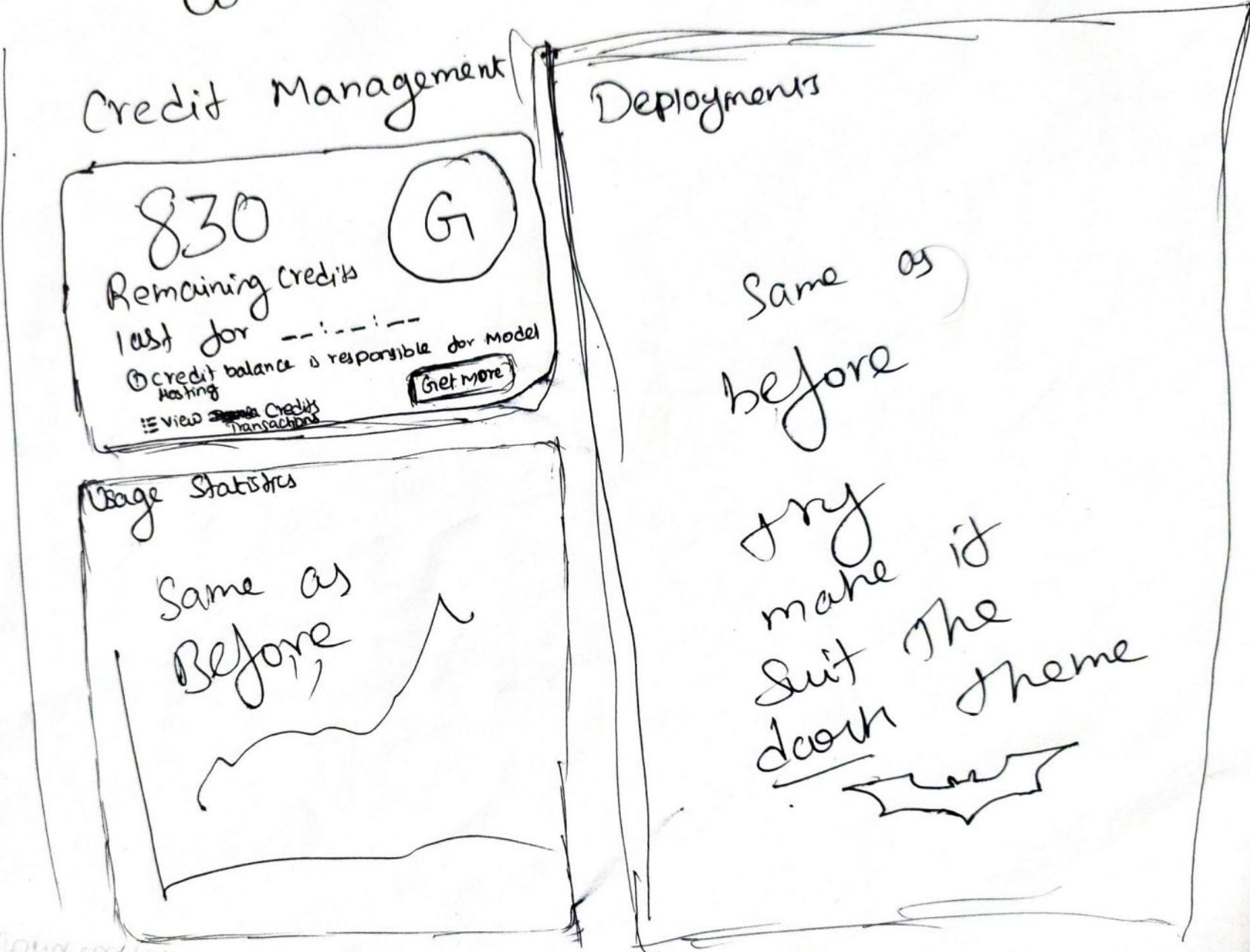
screen

component
with
navbar
should
be rendered

when clicked ↑
this chat component will be rendered/replaced
with Deploy dialog forms (Create component ID)

6!) Dashboard suggestion (UI)

Sidebar
as it
is



The original source