

1) (b) 8.18000

$$x : y$$

$$\frac{1}{18} : \frac{1}{24}$$

$$24 + 18 = 42.$$

$$24 : 18$$

$$\text{യുടെ പങ്ക്} = \frac{18}{42} \times 42000 = 8.18000.$$

2) (d) 4:3

മുതൽഭാഗം ഉപയോഗം

$$\text{ഭയത്നം ഉൾപ്പെടെ} \rightarrow M_1 \times d_1 = M_2 \times d_2$$

$$16 \times 15 = 20 \times d_2$$

$$\text{ഭയത്നം} \rightarrow 3 : 4$$

$$\text{ക്രിയക്ക്} \rightarrow 4 : 3$$

3) (d) 9 ദശലക്ഷം

$$M_1 \times d_1 = M_2 \times d_2$$

$$12 \times 15 = 20 \times d_2$$

$$d_2 = \frac{12 \times 15}{20} = \frac{12 \times 15}{20} = 9 \text{ ദശലക്ഷം}$$

4) (b) 70 lb.

$$\frac{M_1 \times d_1}{W_1} = \frac{M_2 \times d_2}{W_2}$$

$$\frac{20 \times 6}{112} = \frac{25 \times 3}{W_2}$$

$$W_2 = \frac{25 \times 3 \times 112}{20 \times 6} = \frac{25 \times 3 \times 112}{120} = 70 \text{ lb.}$$

5) (a) 4 നൂറുകൾ

$$A : B$$

$$\text{ക്രിസ്തം} \quad 2 : 1$$

$$\text{ദാഹം} \quad 1 : 2 \times 6$$

6, 12 നൂറുകൾ

A → 6 നൂറുകൾ, B → 12 നൂറുകൾ

$$A+B \rightarrow \frac{24}{24} = \frac{6 \times 12}{6+12} = \frac{6 \times 12}{18} = 4 \text{ നൂറുകൾ.}$$

6) (b) $2\frac{1}{4}$ നൂറുകൾ

$$\text{മുത്തം} \rightarrow 3$$

$$\text{വെള്ളം} \rightarrow 9$$

$$\text{മുത്തം} + \text{വെള്ളം} \rightarrow \frac{27}{12} = \frac{3 \times 9}{3+9} = \frac{3 \times 9}{12} = \frac{9}{4} \text{ നൂറുകൾ}$$

$$\frac{9}{4} = 2\frac{1}{4} \text{ നൂറുകൾ.}$$

7) (c) 84

മുതൽകൂടാതെ നൂറുകൾ

$$300 \rightarrow 90$$

$$- 20$$

$$300 \rightarrow 70$$

$$- 50$$

$$250 \rightarrow ?$$

$$M_1 \times d_1 = M_2 \times d_2$$

$$300 \times 70 = 250 \times d_2$$

$$d_2 = \frac{300 \times 70}{250} = \frac{300 \times 70}{250} = 84$$

$$= 84 \text{ നൂറുകൾ.}$$

8) (b) 4 ദിവസം

$$A+B \rightarrow \frac{1}{6}$$

$$B+C \rightarrow \frac{1}{12}$$

$$C+A \rightarrow \frac{1}{4}$$

$$2(A+B+C) \rightarrow \frac{1}{6} + \frac{1}{12} + \frac{1}{4} = \frac{2+1+3}{12} = \frac{6}{12} = \frac{1}{2}$$

$$2(A+B+C) \rightarrow \frac{1}{2}$$

$$A+B+C \rightarrow \frac{1}{2 \times 2} = \frac{1}{4}$$

$$= \frac{4}{1} = 4 \text{ ദിവസം.}$$

9) (c) 12 ദിവസം

$$\begin{array}{c} \text{4 days} \quad x \text{ days} \\ \hline A+B \quad B \end{array} \quad \begin{array}{l} A \rightarrow \frac{1}{12} \\ B \rightarrow \frac{1}{18} \end{array}$$

$$4\left(\frac{1}{12} + \frac{1}{18}\right) + x \times \frac{1}{18} = 1.$$

$$4\left(\frac{18+12}{12 \times 18}\right) + \frac{x}{18} = 1$$

$$\frac{4 \times 30}{12 \times 18} + \frac{x}{18} = 1 \Rightarrow \frac{5}{9} + \frac{x}{18} = 1$$

$$\frac{x}{18} = 1 - \frac{5}{9} = \frac{9-5}{9} = \frac{4}{9}$$

$$x = \frac{4}{9} \times 18 = 8$$

$$x = 8$$

മൊത്തം ദിവസം = 4 + 8 = 12 ദിവസം.

10) c) 20 ಗುಣಕಿ

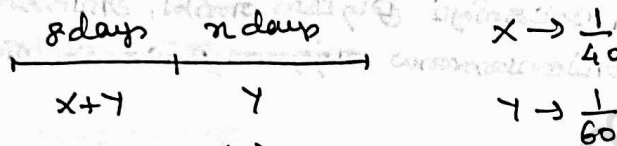
$$M_1 \times d_1 \times h_1 = M_2 \times d_2 \times h_2$$

$$6 \times 24 \times 10 = 9 \times d_2 \times 8$$

$$d_2 = \frac{6 \times 24 \times 10}{9 \times 8} = \frac{2 \times 6 \times 24 \times 10}{3 \times 9 \times 8} = 20$$

$$d_2 = 20.$$

11) (a) 48



$$8 \left(\frac{1}{40} + \frac{1}{60} \right) + x \left(\frac{1}{60} \right) = 1$$

$$8 \left(\frac{60+40}{40 \times 60} \right) + \frac{x}{60} = 1 \Rightarrow \frac{8 \times 100}{40 \times 60} + \frac{x}{60} = 1$$

$$\frac{1}{3} + \frac{x}{60} = 1 \Rightarrow \frac{x}{60} = 1 - \frac{1}{3} = \frac{3-1}{3} = \frac{2}{3}$$

$$x = \frac{2}{3} \times 60 = 40.$$

$$x = 40 \text{ ಗುಣಕಿ.}$$

$$\begin{aligned} \text{ಒಟ್ಟಿನಲ್ಲಿ ಒಟ್ಟು ಗುಣಕಿ} &= 8 + 40 \\ &= 48 \text{ ಗುಣಕಿ.} \end{aligned}$$

12) (a) 12

$$A+B \rightarrow 4$$

$$A \rightarrow 6$$

$$B \rightarrow \frac{xy}{x-y} = \frac{4 \times 6}{6-4} = \frac{2 \times 6}{2} = 12$$

$$B = 12 \text{ ಗುಣಕಿ}$$

13)

(c) 10 ദിവസം

A : B

ക്രിയക്ക് 100% : 160%

ക്രിയക്ക് $\Rightarrow 10 : 16$

ദിവസം $\Rightarrow 16 : 10 \Rightarrow A \rightarrow 16 \text{ days}$
 $B \rightarrow 10 \text{ days}$

A $\rightarrow 16$ ദിവസം

B $\rightarrow 10$ ദിവസം

14)

(c) 10

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

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

$$C+A \rightarrow \frac{1}{20}$$

$$2(A+B+C) \rightarrow \frac{1}{12} + \frac{1}{15} + \frac{1}{20} = \frac{5+4+3}{60} = \frac{12}{60} = \frac{1}{5}$$

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

$$(A+B+C) \rightarrow \frac{1}{5 \times 2} = \frac{1}{10}$$

$$A+B+C = \frac{10}{1} = 10 \text{ ദിവസം}$$

15)

(a) 3

x days 5 days

($x+5$) ദിവസം

$$\frac{1}{x} \rightarrow \frac{1}{15}$$

$$\frac{1}{5} \rightarrow \frac{1}{10}$$

$$x \left(\frac{1}{15} + \frac{1}{10} \right) + 5 \times \frac{1}{10} = 1$$

$$x \left(\frac{10+15}{15 \times 10} \right) = 1 - \frac{5}{10} = \frac{10-5}{10} = \frac{5}{10} = \frac{1}{2}$$

$$x \left(\frac{25}{15 \times 10} \right) = \frac{1}{2} \Rightarrow x = \frac{1}{2} \times \frac{3}{1} \times \frac{15 \times 10}{25} = 3$$

$x = 3$ ദിവസം.

16) (b) 2425

$$\frac{M_1 \times h_1}{W_1} = \frac{M_2 \times h_2}{W_2}$$

$$\frac{60 \times 5}{4850} = \frac{25 \times 6}{W_2}$$

$$W_2 = \frac{25 \times 6 \times 4850}{60 \times 5} = \frac{25 \times 6 \times 4850}{60 \times 5}$$

$$W_2 = 2425.$$

17) (a) 90

$$M_1 \times d_1 \times h_1 = M_2 \times d_2 \times h_2$$

$$12 \times 90 \times 8 = 8 \times d_2 \times 12$$

$$d_2 = \frac{12 \times 90 \times 8}{8 \times 12} = 90 \text{ cm}$$

18) (c) 24

6 ജാക്കറ്റ് ചിലവു 8 വെണ്ണകൾ \rightarrow 86 രൂപകൾ

$$6 \text{ ജാക്കറ്റ്} = 8 \text{ വെണ്ണകൾ}$$

$$1 \text{ ജാക്കറ്റ്} = \frac{8}{6} \text{ വെണ്ണ}$$

$$14 \text{ ജാക്കറ്റ്} = \frac{8}{6} \times 14 = \frac{56}{3} \text{ വെണ്ണകൾ.}$$

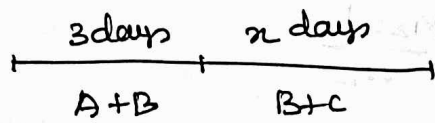
$$14 \text{ ജാക്കറ്റ്} + 10 \text{ വെണ്ണകൾ} = \left(\frac{56}{3} + 10\right) \text{ വെണ്ണകൾ} = \frac{56+30}{3}$$
$$= \frac{86}{3} \text{ വെണ്ണകൾ.}$$

$$M_1 \times d_1 = M_2 \times d_2$$

$$8 \text{ വെണ്ണ} \times 86 = \frac{86}{3} \text{ വെണ്ണ} \times d_2$$

$$d_2 = \frac{8 \times 86 \times 3}{86} = 24 \text{ രൂപകൾ.}$$

19) (a) 5 BCm



$$A \rightarrow \frac{1}{10}$$

$$B \rightarrow \frac{1}{15}$$

$$C \rightarrow \frac{1}{30}$$

$$3\left(\frac{1}{10} + \frac{1}{15}\right) + x\left(\frac{1}{15} + \frac{1}{30}\right) = 1$$

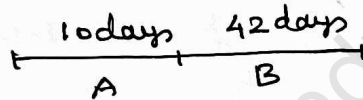
$$3\left(\frac{15+10}{10 \times 15}\right) + x\left(\frac{30+15}{15 \times 30}\right) = 1$$

$$\frac{3 \times 2 \times 2}{10 \times 15} + x \times \frac{45}{15 \times 30} = 1 \Rightarrow \frac{1}{2} + \frac{x}{10} = 1$$

$$\frac{x}{10} = 1 - \frac{1}{2} = \frac{1}{2} \Rightarrow x = \frac{1}{2} \times 10 = 5$$

$x = 5$ BCm.

20) (b) 30 BCm.



$$A \rightarrow \frac{1}{80}$$

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

$$10 \times \frac{1}{80} + 42 \times \frac{1}{x} = 1$$

$$42 \times \frac{1}{x} = 1 - \frac{1}{8} = \frac{8-1}{8} = \frac{7}{8} \Rightarrow \frac{42}{x} = \frac{7}{8}$$

$$x = \frac{42 \times 8}{7} = 48$$

$A \rightarrow 80$ BCm

$B \rightarrow 48$ BCm

$$A+B \rightarrow \frac{xy}{x+y} = \frac{80 \times 48}{80+48} = \frac{80 \times 48}{128} = \frac{80 \times 48}{128} = 30$$

$= 30$ BCm.

21) (a) 20

$$M_1 \times d_1 = M_2 \times d_2$$

$$100 \times 7 = M_2 \times 35$$

$$M_2 = \frac{100 \times 7}{35} = 20 \text{ Buh.}$$

22) (a) 5

$$A+B \rightarrow 6 \rightarrow \frac{1}{6}$$

$$B+C \rightarrow 10 \rightarrow \frac{1}{10}$$

$$(+)$$

$$C+A \rightarrow \frac{15}{2} \rightarrow \frac{2}{15}$$

$$2(A+B+C) \rightarrow \frac{1}{6} + \frac{1}{10} + \frac{2}{15} = \frac{5+3+4}{30} = \frac{12}{30}$$

$$2(A+B+C) \rightarrow \frac{2}{5}$$

$$A+B+C \rightarrow \frac{2}{5 \times 2} = \frac{1}{5} \text{ (1 Buh. Buh. Buh.)}$$

$$A+B+C \rightarrow \frac{5}{1} = 5 \text{ Buh. Buh.}$$

23) (a) 15

$$M_1 \times d_1 = M_2 \times d_2$$

$$18 \times 20 = 24 \times d_2$$

$$d_2 = \frac{18 \times 20}{24} = \frac{18 \times 5}{4} = 15$$

$$d_2 = 15 \text{ Buh. Buh.}$$

24)

(b) 30

$$A+B \rightarrow 10$$

$$B \rightarrow 15$$

$$B \rightarrow \frac{xy}{x-y} = \frac{10 \times 15}{15-10} = \frac{10 \times 15}{5} = 30$$

= 30 பணக்கம்.

25)

(b) 15 பணக்கம்.

$$A \rightarrow 60$$

$$B \rightarrow 20$$

$$A+B \rightarrow \frac{xy}{x+y} = \frac{60 \times 20}{60+20} = \frac{60 \times 20}{80}$$

= 15 பணக்கம்.