5) $(10M \times 20D) = (20B \times 20D) = 400$ unit

($M \times 2$, $B \times 1$)

$10M = 20B$

$1M = 2B$

$$\frac{M}{B} = \frac{2}{1}$$

$(8M + 4B) \times 20D = ?$

($8M \times 2$, $4B \times 1$)

$20 \times 20 = 400$

9) $1M \times 88D = 2W \times 88D = 3B \times 88D$

$1M = 2W = 3B$ — 6

$M : W : B = 6 : 3 : 2$

T.W. $= 1M \times 88D = 528$ ✓ ($1M \times 6$)

$(1M + 1W + 1B) \times ? = 528$

($1M \times 6$, $1W \times 3$, $1B \times 2$)

$11x = 528$

$x = 48$ days

13) $(1M+1W+1B) \times 3D = 1M \times 6D = 1C \times 18D$

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

Child = $\frac{3}{18} = \frac{1}{6}$ = 16.66%

Woman = $\frac{1}{3}$ = 33.33%

100%

$\frac{1}{3}$ — 3

3 — 9 day

14) $(3M+4B)\times 12\ D = (4M+3B)\times 10\ D$

$36M+48B = 40M+30B$

$18B = 4M$

$\frac{M}{B} : \frac{9}{2}$

$T.W. = (4M + 3B)\times 10 = 420$

$\times 9 \quad \times 2$

$(2M + 3B)\times x = 420$

$\times 9 \quad \times 2$

$24x = 420$

$x = \frac{420}{24} = \frac{70}{4} = 17\frac{2}{4} = 17\frac{1}{2}$

12) $1M \times 20D = 1W \times 30D = 1C \times 60D$

60

$M : W : B = 3 : 2 : 1$

$T.W. = 1M \times 20D = 60$

$\times 3$

$(2M + 8W + xB)\times 2 = 60$

$\times 3 \quad \times 2 \quad \times 1$

$22 + x = 30$

$x = 8$

16) $28M \times 15D = 15W \times 24D$

$$\frac{M}{W} = \frac{15 \times 24}{28 \times 15} = \frac{6}{7}$$

$$\frac{30M \times 1D}{18W \times 1D} = \frac{30 \times 6}{18 \times 7} = \frac{10}{7}$$

(30M: $\times 6$, 10; 18W: $\times 7$, 3)

17) $12M \times 36D = 12W \times 48D$

$$\frac{M}{W} = \frac{48}{36} = \frac{4}{3}$$

$T.W = 12M \times 36D = 48 \times 36$ ($\times 4$)

$\Rightarrow (10M + 8W) \times x = 48 \times 36$ ($\times 4$, $\times 3$, 9)

$$x = \frac{48 \times 36}{64} = 27 \text{ days}$$

18) $(3M + 4W + 6C) \times 7D = T.W$

$M : W : C = 2 : 4 : 1$

$T.W. = (3M + 4W + 6C) \times 7D = 28 \times 7$

$\times 2 \quad \times 4 \quad \times 1$

$x W \times 7D = 28 \times 7$

$\times 4$

$4x = 28$

$x = 7$ Women

19) $4M \times 7H \times 12D = 6W \times 7H \times 12D$

$4M = 6W$

$\frac{M}{W} = \frac{3}{2}$

$T.W_0 = 4M \times 7H \times 12D$

$\overset{\times 3}{M}$

$\Rightarrow 12 \times 7 \times 12 = T.W$

$8H\left[(\underset{\times 3}{10M} + \underset{\times 2}{3W})\right] \times x = (12 \times 7 \times 12) \times 2$

$\cancel{36} \times 8 \times x = 12 \times 7 \times \cancel{12} \times \cancel{2}$

$\cancel{3}$ $\quad$ u

$x = 7$ days

10) $x + y + z = \frac{2700}{18} = 150$ ✓

$x + z = \frac{940}{10} = 94$ ✓

$y = 56$

$y + z = \frac{1520}{20} = 76$

$z = 20$

$x = 74$

150

12) $1725 - 920 = \frac{805}{7} = 115$ ₹

15) $P = \frac{1}{3}$ — 5 / 15

$Q = \frac{1}{4}$ — 6 / 24

120

$P = 15 - 8$

$Q = 24 - 5$

$Q = \frac{5}{13} \times 390^{30} = 150$

Pipes & Cistern

(60)

$A = 30^{+} \text{ —— } 2$

$B = 20^{+} \text{ —— } 3$

5

$A+B = \frac{60}{5} = 12 \text{ Hrs}$

(120)

$A = 30^{+} \text{ —— } 4$

$B = 40^{-} \text{ —— } -3$

1

$(+A)-(B) = \frac{120}{1} = 120 \text{ Hours}$

(30)

$A = 30 \text{ —— } 1^{+}$

$B = \text{ —— } -4^{-}$

$A^{+}-B^{-} = 10 \text{ —— } 3^{-}$

$1-P = -3$

$P = 4$

$B = \frac{30}{4} = 7.5$

(60)

$A^{+} = 30 \text{ —— } 2^{+}$

$B^{-} = 20 \text{ —— } 3^{-}$

$C^{+} = \frac{60}{7} \text{ —— } 7$

$A+B+C = 10 \text{ —— } 6^{+}$

$A-B+C = 6$

$2-3+C = 6$

$C = 7$