

S1. Ans.(a)

Sol.

$$184 \times 5 + 5 = 925$$

$$5 \times 1 + 1, 6 \times 2 + 2, 14 \times 3 + 3, 45 \times 4 + 4, 184 \times 5 + 5$$

S2. Ans.(b)

Sol.

$$9 \times 2 = 18$$

$$12 \times 0.5, 6 \times 1, 6 \times 1.5, 9 \times 2$$

S3. Ans.(c)

Sol.

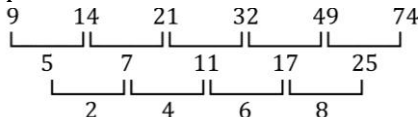
$$232 \times 5 + 5 = 1165$$

$$7 \times 1 + 1, 8 \times 2 + 2, 18 \times 3 + 3, 57 \times 4 + 4, 232 \times 5 + 5$$

S4. Ans.(d)

Sol.

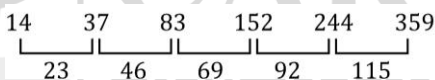
$$49 + 25 = 74$$



S5. Ans.(a)

Sol.

244



S6. Ans.(c)

Sol.

Let, weight of A be $3x$ kg

Then weight of B = x

And weight of C = $3x + 29$

$$3x + x + 3x + 29 = 26 \times 3 = 78$$

$$\text{or, } 7x = 49$$

$$\text{or, } x = 7$$

$$\therefore \text{ weight of C} = 3x + 29 = 21 + 29 = 50$$

S7. Ans.(b)

Sol.

$$616 = \pi r^2$$

$$\text{or, } r^2 = \frac{616 \times 7}{22} = 28 \times 7 = 4 \times 7 \times 7$$

$$\text{or, } r = 14$$

Diameter = 28 cm

Perimeter of semi-circle = $\pi \times 28 + 28 \times 2$

$$= \frac{22}{7} \times 28 + 56$$

$$= 144 \text{ cm}$$

S8. Ans.(a)

Sol.

Let, the income be Rs. $3x$, then

$$\frac{1}{5} \times 2x = 2400$$

$$\text{or, } x = 6000$$

hence, total income = $3x = \text{Rs. } 18000$

S9. Ans.(c)

Sol.

$$\text{Cost price of commodity} = 4935 \times \frac{2}{3} = \text{Rs. } 3290$$

$$\text{Labeled price} = 3290 \times \frac{10}{7} = \text{Rs. } 4700$$

S10. Ans.(a)

Sol.

$$\frac{36}{12+x} = \frac{9}{5}$$

$$\text{or, } 180 = 108 + 9x$$

$$\text{or, } 9x = 72$$

$$\Rightarrow x = 8$$

S11. Ans.(b)

Sol.

Let speed of boat be $10x$ km/hr

Then speed of stream is $3x$ k/hr

$$\frac{117}{9} = 10x + 3x$$

$$\text{or, } 13x = 13$$

$$\text{or, } x = 1$$

Distance travelled by boat in 2 hrs. going upstream =

$$2 \times (10 - 3)$$

$$= 14 \text{ km}$$

S12. Ans.(a)

Sol.

Let, A takes ' x ' days to finish the work alone

Then,

$$\frac{1}{x} + \frac{1}{x+6} = \frac{3}{40}$$

$$\text{or, } x = 24$$

Time taken by B = $24 + 6 = 30$ days

S13. Ans.(b)

Sol.

Let, A takes x days,

Then,

$$\frac{1}{x} + \frac{1}{x+24} = \frac{2}{45}$$

By option,

$$x = 36$$

S14. Ans.(a)

Sol.

$$(472 + 390 + 424) - (321 + 296) = 1286 - 617 = 669$$

S15. Ans.(a)

Sol.

No. of taps sold by machine B and E in May = $180 + 320 = 500$

No. of taps sold by machine A and E in Aug. = $323 + 297 = 620$

$$\text{Req. \%} = \frac{(620-500)}{620} \times 100 = \frac{12}{62} \times 100 = 19.35\% \approx 19\%$$

S16. Ans.(b)

Sol.

No. of taps sold by machine C in May, June and July = $191 + 297 + 281$

$$= 769$$

No. of taps sold by machine D in August, September and October = $361 + 371 + 397$
 $= 1129$
 Difference = 360
 S17. Ans.(d)
 Sol.
 Total no. of taps manufactured by machine B = $215 + 330 + 490 + 370 + 472 + 500$
 $= 2377$
 Total no. of taps manufactured in September = $417 + 472 + 371 + 390 + 424$
 $= 2074$
 Required difference = $2377 - 2074 = 303$

S18. Ans.(a)
 Sol.
 No. of taps manufactured by A and D in June = $441 + 481 = 922$
 No. of taps sold by A and D in October = $371 + 397 = 768$
 Ratio = $922:768 = 461:384$

19. (d); Let A's capital = $3x$
 B's capital = $5x$
 Ratio of their profit = $(4 \times 3x) : (T \times 5x)$
 $\therefore \frac{12x}{5Tx} = \frac{4}{5}$
 $3 = T$
 \therefore Required time = 3 months

20. (d); Let no. of students in class A, B and C be x, y and z
 $\therefore A = 83x$
 $B = 76y$
 $C = 85z$
 Now, $A + B = 79x + 79y$
 $B + C = 81(y + z) = 81y + 81z$
 $\therefore 83x + 76y = 79x + 79y$
 $4x = 3y$
 $\frac{x}{y} = \frac{3}{4}$
 And, $76y + 85z = 81y + 81z$
 $5y = 4z$
 $\frac{y}{z} = \frac{4}{5}$
 $\therefore x : y : z = 3 : 4 : 5$
 \therefore Required average = $\frac{83 \times 3 + 76 \times 4 + 85 \times 5}{12}$
 $= \frac{249 + 304 + 425}{12}$
 $= \frac{978}{12}$
 $= 81.5$

21. (a); Let Required money = x
 $\therefore \frac{x \times 8 \times 4}{100} + \frac{x \times 6 \times 10}{100} + \frac{x \times 5 \times 12}{100} = 12160$
 $\frac{x}{100} (32 + 60 + 60) = 12160$
 $x = \frac{12160 \times 100}{152} = 8000$ Rs.

22. (b); Let speed of train = S km/hr
 $(S - 6) \times \frac{5}{18} = \frac{75}{15} \times 2$
 $S - 6 = 36$
 $S = 42$ km/hr
 Let speed of the second person = x km/hr
 $\therefore (42 - x) \frac{5}{18} = \frac{75}{27} \times 4$
 $42 - x = 40$
 $x = 2$ km/hr

23. (c); Area of four walls = $2(l + b)h$
 $= 2(24) \times 4 = 192$
 Cost = $192 \times 8.40 = 1612.8$

24. (a); Principal = $(S.I. \times 100) / (\text{Time} \times \text{Rate})$
 $= (1200 \times 100) / (4 \times 8) = \text{Rs } 3750$
 New principal = $3 \times 3750 = \text{Rs } 11250$
 $\therefore S.I. = (P \times R \times T) / 100 = (11250 \times 3 \times 6) / 100 = \text{Rs } 2,025$

25. (e); $P + 2Q + R = 59$
 $3P + Q + R = 68$
 $P + 3Q + 3R = 108$
 Solving the equation, $P = 12$ years, $Q = 15$ years, $R = 17$ years.
 Sum of their ages = 44 years.

26. (d); $26 + 108 \times \frac{3}{4} = ?$
 $? = 107$

27. (b); $? = \frac{37584}{348 \times 9} \Rightarrow ? = 12$

28. (b); $499840 + 12096 = ? \Rightarrow ? = 511936$

29. (c); $9600 \times \frac{5}{16} \times \frac{6}{24} \times \frac{27}{6} = ?$
 $? = 3375$

30. (b); $\frac{2125}{85} = \sqrt{?}$
 $? = 625$

31. (e); $\frac{26}{24} \times 408 + \frac{25}{46} \times \frac{1}{100} \times 41400 = ?$
 $? = 442 + 225$
 $? = 667$

32. (e); $636.66 + 366.36 + 363.33$
 $= 1366.99$

33. (c); $3251 + 6205 + 1109 = 10565$

34. (d); $? / 26 \times 65 = 1105$
 $? = \frac{1105 \times 26}{65} = 442$

35. (b); $32.4 \times 11.5 \times 8.5$
 $= 372.6 \times 8.5$
 $= 3167.1$