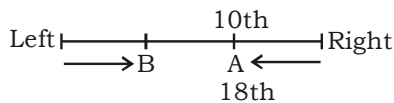




  
**K D Campus Pvt. Ltd**

2007, OUTRAM LINES, 1ST FLOOR, OPPOSITE MUKHERJEE NAGAR POLICE STATION, DELHI-110009



Total no. of person =  $18 + 10 - 1 = 27$

51. (D) CP of the goods = ₹ 900  
 SP of the goods = 110% of 900  
 = ₹ 990

$$\text{MP} = \frac{\text{SP} \times 100}{100 - \% \text{ discount}}$$

$$= \frac{990 \times 100}{100 - 10}$$

$$= \frac{990 \times 100}{90}$$

= ₹ 1100

52. (C) C's 1 day work =  $\frac{1}{4} - \left(\frac{1}{8} + \frac{1}{12}\right)$

$$= \frac{1}{4} - \left[\frac{3+2}{24}\right]$$

$$= \frac{1}{4} - \frac{5}{24}$$

$$= \frac{1}{24}$$

$$\text{A} : \text{B} : \text{C} = \frac{1}{8} : \frac{1}{12} : \frac{1}{24}$$

$$= 3 : 2 : 1$$

Share's of C =  $\frac{1}{6} \times 4500 = ₹ 750$

53. (A) Let the cost price of the article = ₹ 100

MP = 130% of 100 = ₹ 130

SP = 90% of 130

= ₹ 117

∴ % profit =  $(117 - 100)\%$   
 = 17%

54. (A) 7 men = 10 women

1 man =  $\frac{10}{7}$  women

∴ 14 men and 20 women

=  $14 \times \frac{10}{7}$  women + 20 women

= 40 women

Now, more work, more days  
 more women, less days

$$\left. \begin{array}{l} \text{Work} \quad 1 : 6 \\ \text{Women} \quad 40 : 10 \end{array} \right\} :: 10 : x$$

where x is no. of days.

$$\Rightarrow 1 \times 40 \times x = 10 \times 6 \times 10$$

$$x = \frac{10 \times 6 \times 10}{40}$$

= 15 days

55. (B) Suppose there were x persons initially.

Time taken by 1 person =  $55 \times x$  days

New number of persons =  $x + 6$

Time taken by 1 person

=  $(x + 6) \times 44$ , [11 days less]

∴  $(x + 6) \times 44 = 55 \times x$

$$\Rightarrow 44 \times 6 = 55x - 44x$$

$$\Rightarrow \frac{44 \times 6}{11} = x$$

$$\Rightarrow x = 24$$

56. (B) Let the SP of 1 orange = ₹ x

Then, SP of 10 oranges = ₹ 10x

SP of 12 oranges = ₹ 12x

CP = ₹ 10x, SP = 12x

$$\% \text{ profit} = \frac{12x - 10x}{10x} \times 100$$

$$= \frac{2x}{10x} \times 100$$

= 20%

57. (C) For

$$1 - 2x = 0$$

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

∴  $(1 - 2x)$  is a factor of polynomial

$$2x^4 - ax^3 + 4x^2 + 2x + 1$$

Its Remainder = 0

$$\Rightarrow 2\left(\frac{1}{2}\right)^4 - a\left(\frac{1}{2}\right)^3 + 4\left(\frac{1}{2}\right)^2 + 2 \times \frac{1}{2} + 1 = 0$$

$$\Rightarrow \frac{2}{16} - \frac{a}{8} + 1 + 1 + 1 = 0$$

$$\Rightarrow \frac{1}{8} + 3 = \frac{a}{8}$$

$$\Rightarrow \frac{25}{8} = \frac{a}{8}$$

$$\Rightarrow a = 25$$

58. (B) Quantity of alcohol in 400 ml sol<sup>n</sup>.

$$= 15\% \text{ of } 400$$

$$= 60 \text{ ml}$$

Let  $x$  ml alcohol is added to make the strength 32%.

Then,

$$32\% \text{ of } (400 + x) = 60 + x$$

$$\frac{32}{100} \times 400 + \frac{32}{100} \times x = 60 + x$$

$$128 - 60 = x - \frac{32x}{100}$$

$$68 = \frac{68x}{100}$$

$$\Rightarrow x = 100 \text{ ml}$$

59. (D) Let there are 100 students.

No. of scholarship holders (boys)

$$= 75\% \text{ of } \frac{4}{5} \text{ of } 100 = 60$$

No. of scholarship holders (girls)

$$= 70\% \text{ of } \frac{1}{5} \text{ of } 100 = 14$$

% of students who do not hold any scholarship =  $[100 - (60 + 14)]$

$$= 26\%$$

60. (A) Let the two digit number be  $10x + y$ .

Two digit number (when digits are interchanged) =  $10y + x$

ATQ,

$$(10x + y) + (10y + x)$$

$$= 11x + 11y$$

$$= 11(x + y)$$

Hence the resulting no. is divisible by 11.