



K D  
**Campus**  
**K D Campus Pvt. Ltd**

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

$$\frac{2}{3} \text{ (time by B) = 10 days}$$

$$\text{Time taken by B} = \frac{3 \times 10}{2} = 15 \text{ days}$$

52. (C) S.P. of 12 articles = C.P. of 12 articles - S.P. of 3 articles

S.P. of 15 articles = C.P. of 12 articles

Let C.P. of 1 article be Rs. 1

S.P. of 15 articles = Rs. 12

C.P. of 15 articles = Rs. 15

Loss = Rs. 3

$$\text{Loss \%} = \frac{3}{15} \times 100 = 20\%$$

53. (D)  $a^2 + b^2 + c^2 - ab - bc - ca =$

$$\frac{1}{2} [(a-b)^2 + (b-c)^2 + (c-a)^2]$$

$$= \frac{1}{2} [(-1)^2 + (-1)^2 + (2)^2] = \frac{1}{2} \times 6 = 3$$

54. (C)  $R = (r_1 + r_2) - \text{divisor}$

R is the remainder when sum of both the numbers is divided by divisor.

[NOTE: If R becomes -ve, then remainder R =  $(r_1 + r_2)$ ]

$$R = 7$$

$$r_1 = 15$$

$$r_2 = 39$$

$$7 = 39 + 15 - \text{Divisor}$$

$$\text{Divisor} = 47$$

55. (B) Amount of water flowing in 1 minute =  $k(d)^2$   
Amount of water filled by largest pipe in 1

$$\text{minute} = k(2)^2 = \frac{1}{61}$$

$$\Rightarrow k = \frac{1}{61 \times 4}$$

Amount of water filled by pipe of diameter 1 cm in 1 minute =  $k(1)^2 = k$

Amount of water filled by pipe of diameter

$$1\frac{1}{3} \text{ cm in 1 minute} = k\left(\frac{16}{9}\right)$$

Amount of water filled by all the 3 pipes in

$$1 \text{ minute} = \frac{1}{61} + k + k\left(\frac{16}{9}\right)$$

$$= \frac{1}{61} + \frac{1}{61 \times 4} + \frac{1 \times 16}{61 \times 4 \times 9}$$

$$= \frac{1}{36}$$

$\Rightarrow$  cistern will be full in 36 minutes.

$$56. (D) \frac{\text{Speed of A}}{\text{Speed of B}} = \sqrt{\frac{T_B}{T_A}} = 3:2$$

$$57. (D) \frac{x^2 \times x}{yz \times x} + \frac{y^2 \times y}{xz \times y} + \frac{z^2 \times z}{xy \times z}$$

[Multiply & divide by x, y & z]

$$\frac{x^3}{xyz} + \frac{y^3}{zyz} + \frac{z^3}{xyz} = \frac{x^3 + y^3 + z^3}{xyz}$$

$$x^3 + y^3 + z^3 = 3xyz$$

$$(x + y + z = 0)$$

$$= \frac{3xyz}{xyz} = 3$$

58. (B) Let Arvind's age be x years.

Then his father's age = 4x years

$$4x - 5 = 7(x - 5) \text{ or } 3x = 30 \text{ or } x = 10$$

Arvind's father's age is 40 years.

59. (C) Simple Interest earned in 10 years = 100%

For a sum to become 4 times, interest earned = 300%

100% SI is earned in 10 years

300% SI will be earned in 30 years

$$60. (B) \left\{1 \cdot \frac{1}{3}\right\} \left\{1 \cdot \frac{1}{4}\right\} \dots \dots \left\{1 \cdot \frac{1}{n}\right\}$$

$$= \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \times \dots \dots \frac{n \cdot 1}{n} = \frac{2}{n}$$

**Note:- If you face any problem regarding result or marks scored, please contact 9313111777**

**Note:- If your opinion differs regarding any answer, please message the mock test and question number to 8860330003**