SRI KRSIHNAVENI BANKING COACHING CENTRE

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PROBLEMS ON AGES

Max. Marks : 30
Time : 30 Minutes

1. The average age of Arun, Chandu, Monish, Rakesh and Baskar is 30 years. The average age of Arun, Monish and Rakesh is 32 years. What is the average age of Chandu and Baskar?
   A. 26　　B. 27　　C. 29　　D. 30
   E. None of these

2. At present, Mohan is 12 years older than Kumar. After 10 years, Kumar will be 25 years old. What is Mohan's present age?
   A. 27　　B. 29　　C.31　　D. 25
   E. None of these

3. At present, Rani is 6 years younger than Vani. After 5 years, Vani will be 15 years old. What will be age of Rani, 4 years hence?
   A. 6　　　B. 8　　　C. 10　　　D. 12
   E. None of these

4. The ratio between the ages of Mamatha and Samatha is 5 : 3. After 5 years, the sum of their ages will be 74 years. What is the present age of Samatha?
   A. 22　　B. 20　　C. 24　　D. 25
   E. None of these

5. The ratio between the ages of Sudha and Radha is 5 : 8 and the difference between their ages after 5 years will be 12. What is the present age of Sudha?
   A. 18　　B. 19　　C. 21　　D. 20
   E. None of these

6. Latha is 25 years younger than her mother. 15 years hence, Latha will be half as old as her mother will be. How old is her mother at present?
   A. 30　　B. 31　　C. 32　　D. 33
   E. None of these

7. The ratio between the ages of Kalyani and Ragini is 8 : 3 and the sum of their ages is 44 years. What will be the ratio of their ages after 10 years?
   A. 22 : 12　B. 12 : 22　C. 21 : 11　D. 11 : 21
   E. None of these

8. The ratio between ages of Sudeer and Prasad is 5 : 8. After 10 years, it will be 5 : 7. The sum of their ages at present is?
   A. 51　　B. 52　　C. 50　　D. 49
   E. None of these

9. The age of a son 25% less than the age of his father, how much percent is the age of father more than of his son?
   A. 25%　　B. $33\frac{1}{3}$%　　C. 50%　　D. 66　%

10. Abu is as much younger than Rajan as he is older than Raju. The sum of ages of Rajan and Raju is 45 years. What was the age of Abu 6 years back?
    $\frac{2}{3}$
    A. 12　　B. 14　　C. 16　　D. 15
    E. None of these

11. Rajeev's age after 15 years will be 5 times his age 5 years back. What is present age of Rajeev?
    A. 15　　B. 20　　C. 10　　D. 12
    E. None of these

12. Present ages of X and Y are in ratio 5 : 6 respectively. 7 years hence this ratio will become 6 : 7 respectively. What is X's present age in years?
    A. 35　　B. 49　　C. 42　　D. 52
    E. None of these

13. In 10 years. A will be twice as old as B was 10 years ago. If A is now 9 years older than B, the present age of B in years is?
    A. 19　　B. 29　　C. 39　　D. 49
    E. None of these

14. Father said to his son, "I was as old as you are at present at the time of your birth". If the father's age is 38 years now, the son's age five years back was?

A. 14   B. 19   C. 33   D. 38

E. None of these

15. The age of father 10 years ago was thrice the age of his son. Ten years hence, father's are will be twice that of his son. The ratio of their present ages is?

A. 5 : 2   B. 7 : 3   C. 9 : 2   D. 13 : 4

E. None of these

16. The total of the ages of A, B and C is 93 years. Ten years ago, the ratio of their ages was 2 : 3 : 4. What is the present age of C?

A. 24   B. 32   C. 34   D. 38

E. None of these

17. The difference between ages of two persons is 10 years. 15 years ago, the older one was twice as old as the younger one. The present age of the elder person is?

A. 25   B. 35   C. 45   D. 55

E. None of these

18. A is two years older than B. Who is twice as old as C. If the total of the ages of A, B and C be 27, then how old is B?

A. 7   B. 8   C. 9   D. 10

E. None of these

19. The sum of ages of a father and his son is 45 years. 5 years ago, the product of their ages was 34. the ages of the son and the father are respectively?

A. 6, 39   B. 7,38   C. 9, 36   D. 11, 34

E. None of these

20. Ramu is 40 years old and Suresh is 60 years old. How many years ago was the ratio of their ages 3 : 5?

A. 5   B. 10   C. 20   D. 37

E. None of these

PROBLEMS ON AGES - Key Sheet

1	B	2	A	3	B	4	C	5	D
6	E	7	C	8	B	9	B	10	D
11	C	12	A	13	C	14	A	15	B
16	D	17	B	18	D	19	A	20	B

Answers :-

① B ⑥ E ⑪ C ⑯ D

② A ⑦ C ⑫ A ⑰ B

③ B ⑧ B ⑬ C ⑱ D

④ C ⑨ B ⑭ A ⑲ A

⑤ D ⑩ D ⑮ B ⑳ B

Explanation :-

① A :-

$$\frac{A + C + M + R + B}{5} = 30 \quad , \quad \frac{A+M+R}{3} = 32$$

$$A + M + R = 96$$

$$\therefore A + C + M + R + B = 150$$

$$\therefore 96 + C + B = 150$$

$$C + B = 54$$

$$\therefore \frac{C+B}{2} = \frac{54}{2} = 27 \, .$$

② Ans :-

$$M = 12 + K \quad , \quad K + 10 = 25$$

$$\therefore K = 15$$

$$M = 12 + 15$$

$$\therefore M = 27$$

③ Ans :-

$$R = V - 6 \quad , \quad V + 5 = 15$$

$$\therefore V = 10$$

$$R = 10 - 6$$

$$\therefore R = 4 .$$

$$\therefore 4 \text{ years hence, } R = 4 + 4 = 8 \text{ years.}$$

④ Ans :-

$$M : S = 5 : 3 \quad , \quad (M+5) + (S+5) = 74$$

$$\therefore M + S = 64 .$$

$$5 + 3 = 8 \longrightarrow 64$$

$$3 \longrightarrow ?$$

$$\therefore S = \frac{3}{8} \times \overset{8}{\cancel{64}} = 24 \text{ years}$$

(5) Ans:- $S : R = 5 : 8$

$R - S = 3 \rightarrow 12$

$5 \rightarrow ?$

$S = \dfrac{5}{\cancel{8}} \times \cancel{12}^{4} = \underline{20 \text{ years}}$

(6) Ans:- $L : M = 1 : 2$

$M - L = 2 - 1 = 1 \longrightarrow 25$

$2 \rightarrow ?$

$\therefore M = \dfrac{2}{1} \times 25 = 50 - 15 = \underline{35 \text{ years}}$

(7) Ans:- $K : R = 8 : 3$

$K + R = 8 + 3 = 11 \longrightarrow 44$

$8 \rightarrow ?$

$3 \rightarrow ?$

$\dfrac{8}{\cancel{11}_{1}} \times \cancel{44}^{4} = 32 + 10 = 42$

$\dfrac{3}{\cancel{11}_{1}} \times \cancel{44}^{4} = 12 + 10 = 22$

$\therefore K + R = \dfrac{42}{21} : \dfrac{22}{11} = \underline{21 : 11}$

(8) Ans:- $S : P = 5x : 8x$

$\dfrac{5x + 10}{8x + 10} = \dfrac{5}{7}$

$\therefore 35x + 70 = 40x + 50$

$\therefore 5x = 20 \Rightarrow x = 4$

$\therefore S + P = 5x + 8x = 13x = \underline{52 \text{ years}}$

(9) Ans:- $F = \dfrac{25}{100 - 25} \times 100$

$= \dfrac{\cancel{25}^{1}}{\cancel{75}_{3}} \times \cancel{100}^{100} = \dfrac{100}{3} = \underline{33\tfrac{1}{3} \%}$

(10) Ans:- $R_1 - A = A - R_2$, $R_1 + R_2 = 42$

$\boxed{\begin{array}{l} R_1 - \text{Rajan} \\ R_2 - \text{Raju} \end{array}}$

$2A = R_1 + R_2$

$2A = 42 \Rightarrow A = 21$

$\therefore A - 6 \text{ years back} = 21 - 6 = \underline{15 \text{ years}}$

Sol:- Let, Present age = x

$$(x+15) = 5(x-5)$$
$$x+15 = 5x-25$$
$$4x = 40 \Rightarrow x = 10$$

(12) Sol:- Let x, y ages $\Rightarrow 5x, 6x$

$$\frac{5x+7}{6x+7} = \frac{6}{7} \Rightarrow 35x+49 = 36x+42$$
$$\therefore x = 7.$$

$$\therefore x\text{'s Present age} = 5x = 35$$

(13) Sol:- Let, B's Present age = x.

$$A\text{'s Present age} = x+9.$$

$$\therefore (x+9)+10 = 2(x-10)$$
$$\therefore x+19 = 2x-20$$
$$\therefore x = 39$$

(14) Sol:- Let, Son's Present age = x.

$$(38-x) = x$$
$$\Rightarrow 2x = 38 \Rightarrow x = 19.$$
$$\therefore \text{Son's age } 5 \text{ years back} = (19-5) = 14 \text{ years}$$

(15) Sol:- Let, Ages of Father and son 10 years ago = $3x, x$.

$$\therefore (3x+10)+10 = 2\left[(x+10)+10\right]$$
$$3x+20 = 2x+40$$
$$\therefore x = 20.$$
$$\therefore \text{Required ratio} = (3x+10) : (x+10)$$
$$= 70:30 = 7:3$$

(6) Sol:- Let Ages of A, B and C = $2x, 3x, 4x$.

$$\therefore (2x+10)+(3x+10)+(4x+10) = 93$$
$$9x = 63 \Rightarrow x = 7.$$

$$\therefore C\text{'s Present age} = 4x+10 = 38 \text{ years}$$

⑰ Sol:- Let ages be x, $(x+10)$

$$(x+10) - 15 = 2(x-15)$$

$$x - 5 = 2x - 30$$

$$\therefore x = 25$$

∴ Elder present age = $x + 10 = 35$ years

⑱ Sol:- Let C's age = x years.

∴ B's age = $2x$, A's age = $2x+2$.

$$\therefore (2x+2) + 2x + x = 27$$

$$5x = 25 \Rightarrow x = 5.$$

∴ B's age = $2x$ = 10 years

⑲ Sol:- Let Ages of father and son = x, $45-x$.

$$\therefore (x-5)(45-x-5) = 34$$

$$(x-5)(40-x) = 34$$

$$\therefore x^2 - 45x + 234 = 0$$

$$\therefore (x-39)(x-6) = 0$$

$$\therefore x = 6, 39.$$

∴ Father's age = 39, Son's age = 6

⑳ Sol:- Let, ratio was 3:5, x years ago.

$$\therefore \frac{40-x}{60-x} = \frac{3}{5}$$

$$200 - 5x = 180 - 3x$$

$$2x = 20 \Rightarrow x = 10.$$