.

Problem on Ages

'Problems based on Ages' – is an important topic in all banking Exams; it can come in either Reasoning or in Quantitative Aptitude. But there will be 1-2 questions in every bank exam.

Some people find this one difficult because its statement is very confusing. But anyone can solve this type of questions by reading the statement carefully.
The important thing in any kind of Age Problem, is to decide which age – present or past or future – to be taken as '**x**'!
Let us make a simple rule for ourselves – the '**x**' should be the present age always.
In most cases, taking the present age as '**x**', i.e., the base year works just fine. Past will become, say (**x-10**) years, and future can be denoted as (**x+10**).
But sometimes, 'present age' is not directly given in words. Then, take '**x**' to be the age you are supposed to find.
You can also try putting yourself in someone's place and try to calculate the age!

Example 1: The age of Ram is ten times that of his son Arun. If the age of Arun is 3 years, what is the age of Ram?
Sol. Let Ram's present age = x
Ram's age is 10 times his son's age.
Son's age = 3.
Therefore, 10 times of 3 = x
10 x 3 = x
Ram's age = 30 years

Example 2: Ravi's age after 15 years will be 5 times his age 5 years back. What is his present age ?
Sol: Let age of Ravi in 2012(5 years ago) = x
Age of Ravi in 2032 = 5x
Age of Ravi present age (in 2017) = x+5 or 5x–15
We will solve these two equation to find x.
x+5 = 5x–15
4x= 20
x= 5.
Then Ravi's present age becomes = x +5 = 10

1. Ravi's present age is two-fifth of the age of his father. After 8 years, he will be one-half of the age of his father. How old is the Ravi after 5 years?
(A) 15 years   (B) 18 years
(C) 21 years   (D) 24 years
(E) 25 years

2. Shivani was married 8 year ago. Today her age is 9/7 times to that time of marriage. At present his son's age is 1/6th of her age. What was her son's age 3 year hence?
(A) 5 years   (B) 9 years
(C) 12 years   (D) 15 years
(E) 18years

3. Ritu married 6 years ago. Today her age is $\left(\frac{5}{4}\right)$ times her age at the time of her marriage. Her daughter age is 1/5 of her age. What is the ratio of ritu age to her daughter age after 6 years?
(A) 2:1   (B) 3:1
(C) 4:3   (D) 5:2
(E) None of these

4. A father is twice as old as his son. 20 years ago, the age of the father was 12 times the age of the son. The present age of the father (in years) is:
(A) 30   (B) 36
(C) 40   (D) 44
(E) None of these

5. The average age of A and B is 25 years. If C were to replace A, the average would be 24 and if C were to replace B, the average would be 26. What are the ages of A, B and C respectively?
(A) 25, 24, 26   (B) 24, 26, 25
(C) 26, 24, 24   (D) 27, 23, 25
(E) None of these

6. The ratio of the ages of priya and riya is 2:5. After 8 years, their ages will be in the ratio of 2:3. Then the sum of their present ages will be?
(A) 12 years   (B) 14 years
(C) 16 years   (D) 18 years
(E) None of these

7. The sum of the age of mother and daughter is 100 years. 5 years ago their age were in the ratio of 2:1. The ratio of the age of daughter and mother after 10 years
(A) 2:5   (B) 3:4
(C) 3:5   (D) 4:5
(E) None of these

8. The ratio of the ages of two persons are in the ratio of 5:7 and the difference between their ages is 18 years. Find the sum of the ages of the person after 5 years,
(A) 112 years   (B) 115 years
(C) 117 years   (D) 119 years
(E) None of these

9. The ratio between the A and B age is 7: 9. If the difference between the present ages of Q and P's age after 4 years is 2 then what is the total of the present ages of P and Q?
(A) 42   (B) 44
(C) 46   (D) 48
(E) None of these

10. The sum of the ages of a mother and her son is 45 years. Five years ago, the product of their ages was 3 times the mother age at that time, then the present age of the son,
(A) 8   (B) 10
(C) 12   (D) 14
(E) None of these

SOLUTIONS

1. Answer is option C
Explanation:
Let the father's present age be x years.

Then, Ravi's present age = $\frac{2x}{5}$ years

$\frac{2x}{5} + 8 = \frac{1}{2}$ (x+8)

$\frac{2x+40}{5} = \frac{1}{2}$ (x+8)

4x+80 = 5x+40

x = 40.

Ravi's present age = $\frac{2x}{5}$

= $\frac{2}{5}$×40

= 16

After 5 years, 16+5 = 21 years

2. Answer is option B
Explanation:
Shivani's age at the time of marriage = 7x
Shivani's age at present = 9x
Difference = 9x–7x = 2x
2x = 8 years
x = 4
Shivani's age at present = 9×4 = 36 years
Son's age = $\frac{36}{6}$ = 6 years
After 3 years = 6+3 = 9 years

3. Answer is option B
Explanation:
R = (5/4)*(R – 6)
R = 30 years and daughter age = 30/5 = 6 years.
After 6 years ratio will be = 36/12 = 3:1

4. Answer is option D.
Explanation:
Let the present age of father be x years
Let the present age of son be y years
Given : a father is twice as old as his son
x = 2y
x – 2y = 0 -----------------(1)
Given : 20 years ago, father age is 12 times the son age
x – 20 = 12 (y-20)
x-12y = -220 --------------------(2)
(1) – (2) we get
y = 22; put y value in equation 1
x – 2(22) = 0
x = 44

To find : present age of father
Present age of father is x
So the answer is 44 years.

5. Answer is option D
Explanation:
Given, avg. of (A+B) = 25
∴ (A+B) = 50
Avg. of (C+B) = 24
∴ (C+B) = 48
Avg. of (A+C) = 26
∴ (A+C) = 52
Now , A+B+C = (50+48+52)/2
A+B+C = 75
C = 25, A = 27, B = 23

6. Answer is option B
Explanation :
Let priya age = 2x and riya age = 5x.
So, (2x + 8)/(5x + 8) = 2/3, we get x = 2. So sum of priya and riya = 14

7. Answer is option C
Explanation :
M + D = 100 and (M – 5)/(D -5) = 2/1
we get D = 35 and M = 65. So after 10 years ratio = 45/75 = 3/5

8. Answer is option E
Explanation :
7x – 5x = 18
2x = 18
x = 9
Present ages
7x = 7×9 = 63
5x= 5×9 = 45
Total present age = 63+45 = 108
After 5 years = 108+10 = 118

9. Answer is option D
Explanation :
let age of B is 9x and that of A is 7x. So
9x – (7x +4) = 2, x = 3
So sum will be = 27 + 21 = 48

10. Answer is option A
Explanation :
M + S = 45
(M -5)*(S – 5) = 3*(M – 5) so, S = 8 years