**Chapter-10**

**Problem Based On Ages**

**Introduction-**

**Some questions are given in competitive exams which are based on ages so; here we represented some examples which will be helpful to solve these type of questions.**

**Example:** The ratio of present age of A & B is 2: 3 the present age of A is 30 years. Find the age of B after 5 years?  
**Answer:**

**Step 1:** A: B present age ratio is 2: 3 and A = 30 years.  
**Step 2:** B present age is 30 / 2 x 3 = 45 years.  
**Step 3:** B age after 5 years is 45 + 5 = 50 years.

**Example:** Vineet is as younger to Garima as she is older to Devyani .If the sum of the ages of Garima& Devyani is 58 years. What is Vineet age?  
**Answer:**

**Step 1:** G – V = V – D  
**Step 2:** G + D = 2V  
**Step 3:** 58 = 2V  
**Step 4:** V = 29 years

**Example:**  
Ayush and Vivek is 50 years old and  70 years old . How many years before was the ratio of their ages 3: 5?  
**Answer:**  
Their ratio was  3 : 5 , t years before ,  
So, 50 – t / 70 – t = 3 / 5  
5 ( 50 – t ) = 3 ( 70 – t )  
250 – 5t = 210 – 3t  
2t = 40  
t = 20 years.

**Example:**  
Robin is 28 years old and Reshma is 12 years . In how many years will Robin be twice as old as Reshma?  
**Answer:**  
Let Robin be in x years .

Then, (28 + x) = 2 (12 + x)  
28 + x = 24 + 2x  
x = 4 years .

**Example:**  
Ratio of ages of Meena& Neeta 4 years ago was 3 : 5. If the sum of present ages of Meena& Neeta is 64 years than, Find the present ages of Meena& Neeta.  
**Answer:**  
Let the ages is Meena& Neeta 4 years ago are 3x and 5x.  
Hence,( 3x + 4 )+( 5x + 4 ) = 64 years,  
= 8x + 8 = 64, = 8x = 56, x = 7.  (We get the value of x).  
So the age of Meena, 4 years ago  = 7 x 3 = 21years,  
and the age of Neeta, 4 years ago = 7 x 5 = 35 years.  
Now the present age of Meena is = (21 + 4) = 25 years,  
and present age of Neeta is = ( 35 + 4) = 39 years.

**Example:**  
At present , the ratio between the ages of Anil and  Anu is 4 : 3 . After 4 years , Anil’s age will be 24 years . What is the age of Anu at present?  
**Answer:**  
Let the present age of Anil and Anu is 4x years and 3x years respectively.  
So , After 4 years Anil’s age ,will be 24 ,  
4x + 4 = 24  
4x = 20  
x = 5  
So , Anu present age is 3x = 3 x 5 = 15 years .

**Example:**  
Seven years ago , the age ratio of Sonali and Monali was 6 : 5 . Three years hence, the ratio of their ages will be 11: 10 . What is Monali‘s age at present?  
**Answer:**  
Let the age of Sonali and Monali 7 years ago be 6x and 5x years respectively .  
So, (6x  + 7) + 3 /(5x + 7 ) + 3   = 11 / 10  
10 ( 6x + 10) = 11 ( 5x + 10 )  
5x = 10  
x = 2  
So, Monali‘s present age  = ( 5x + 7 ) = 17 years .

**Example:**  
12 years hence , Bharat will be just five times as old as he was 12 years ago , His present age is ?  
**Answer:**  
Let Bharat present age  be x years .  
Bharat age 12 years ago  = ( 12 – x ) years and his age 15 years hence = ( 12 + x ) .  
So, (12 + x) = 5 (12 – x)  
12 + x = 60 – 5x  
6x = 48  
x = 8  
So , Bharat present age is 8 years .

**Example:**  
Ratio of present ages of C & D is 4 : 6 . The present age of C is 40 years. Find the age of D after 6 years.  
**Answer:**  
Let the ages of C & D are 4x and 6x.  
Hence, C = 4x = 40, = x = 10, (So we get the value of x)  
So the present age of D is = 6x = 6 X10 = 60 years, hence the age of D is  after 6 years 60 + 6 = 66 years.

**Example:**  
The ratio between the present ages of A and B is 6 : 7 . If B is 4 years old than A, What will be the ratio of the ages of A and B after 4 years?  
**Answer:**  
**Step 1:**Let the A’s age and B’s age be 6x and 7x years respectively . Then, 7x – 6x = 4 . S0, x = 4  
**Step 2 :** Required ratio = ( 6x + 4 ) : ( 7x + 4 ) = 28 : 32 = 7 : 8 .

**Example:**  
The ratio of mother age to his son’s age is 7 : 3 . The product of their ages is 756 . The ratio of their ages after 6 years will be?  
**Answer:**  
**Step 1 :** Let the present ages of the mother and son be 7x and 3x years respectively .  
Then, 7x X 3x = 756  
21×2 = 756  
= x2 = 36  
= x = 6   
**Step 2 :** Required ratio = (7x + 6 ) : ( 3x + 6 ) = 48 : 24 = 2 : 1 .