Age Problems

The ratio of the ages of Tina and Rakesh is 9:10 respectively. Ten years ago, the ratio of their ages was 4:5 respectively. What is he present age of Rakesh?

Let Rakesh's present age be 9x years and Mahesh's present age be 10x years

$$\frac{9x-10}{10x-10} = \frac{4}{5}$$

5(9x-10) = 4(10x-10)

45x - 40x = 50 - 40

5x = 10

x = 2

Hence, the present age of Mahesh = (10 × 2) years = 20 years.

Samir's age is one-fourth of his father's age and two-third of his sister Reema's age. What is the ratio of the ages of Samir, Reema and their father respectively?

Let Sameer's age be x years

Then his father's age = 4x years

$$\text{Reema's age} = \frac{3x}{2} \text{ years}$$

$$\therefore \text{Ratio} = x : \frac{3x}{2} : 4x$$

$$= 2 : 3 : 8$$

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

■ Let the ages of father and son 10 years ago be 3x and x years respectively.

■

Then, (3x+10)+10=2[(x+10)+10]

⇒3x+20=2x+40

⇒x=20

∴ Required

ratio =(3x+10):(x+10)=70:30=7:3

The ages of two persons differ by 16 years. If 6 years ago, the elder one be 3 times as old as the younger one, find their present ages.

Let the age of younger persons be x years.

Then, age of elder person = (16 + x)years

6years ago,

Age of younger persons = (x − 6)years

Age of elder person = (16 + x − 6)years

According to the question:

x + 10 = 3(x − 6)

$\Rightarrow$ x + 10 = 3x − 18

$\Rightarrow$ x − 3x = − 18 − 10

$\Rightarrow$ 2x = 28

$\Rightarrow$ x = 14

Now,

Age of younger persons = 14 years

Age of elder person = (16 + 14)years = 30 years

∴ **Their present ages are 14 and 30 years.**

Reetu's age after 6 years will be three-sevenths of her mother's age. 10 years ago, the ratio of their ages was 1:5. What is Reetu's mother's age at present?

Let Reetu's age 10 years ago be 'x' years.

Then, her mother's age 10 years ago = 5x years

$(x + 10) + 6 = 3/7 \times [(5x + 10) + 6]$

$x + 16 = 3/7 (5x + 16)$

$7x + 112 = 15x + 48$

$8x = 64$

$x = 8$

Therefore, Reetu's mother's present age = $(5x + 10) = (5 \times 8 + 10)$ years = 50 years

Hence, Reetu's mother's age at present is 50 years.

The ratio of the present ages of a mother and daughter is 7:1. Four years ago the ratio of their ages was 19:1. What will be the mother's age four years from now?

- Ratio of present ages of mother and daughter = 7:1
- Ratio of their ages four years ago = 19:1
- Let the present age of mother be 7x and the present age of daughter be x.
- Four years ago, the age of mother was (7x - 4) and the age of daughter was (x - 4).
- According to the given information, (7x - 4)/(x - 4) = 19/1
- Solving for x, x = 6
- Therefore, present age of mother = 7x = 42 years
- Four years from now, the age of mother will be 42 years.
- Adding the 4 years, 42 + 4 = 46 years

The ages of A and B are in the ratio of 6:5 and sum of their ages is 44 years. The ratio of their ages after 8 years will be:

- Let present ages (in years) of A and B respectively, be 6X and 5X

Given: 6X + 5X = 44

X = 4

Ratio of ages after 8 years will be

6X + 8 : 5X + 8

or, 32 : 28 or   8 : 7