

1. Mohan is 3 years older than John. In 4 years, Mohan will be  $\frac{3}{2}$  as old as John . How old is Mohan now ?

A) 3 B) 4 C)5 D)6

Solution:

Let the present age of John and Mohan be J and M. Given that Mohan is 3 years older than John. Hence  $M = J + 3$ ...(1) In 4 years time, Mohan will be  $\frac{3}{2}$  as old as John, which implies that  $M + 4 = \frac{3}{2}(J + 4)$ ...(2) Substitute (1) in (2), we get  $J + 3 + 4 = \frac{3}{2}(J + 4)$ ,  $\Rightarrow J + 7 = \frac{3}{2}(J + 4)$ ,  $\Rightarrow 2(J + 7) = 3(J + 4)$ ,  $\Rightarrow 2J + 14 = 3J + 12$ ,  $\Rightarrow J = 2$ . Thus present age of Mohan is 5 years.

2. Lucy is 4 times as old as Amy. Three years ago, Lucy was 13 times as old as Amy. How old is Lucy now?

A)16 B)21 C)19 D)18

Solution:

Let the present ages of Lucy and Amy be L and Y. Given that Lucy is 4 times as old as Amy, which implies that  $L = 4A$ ...(1). It is also given that three years ago Lucy is 13 times as old as Amy, which implies that  $L - 3 = 13(A - 3)$ ...(2). Substitute (1) in (2) we get,  $4A - 3 = 13(A - 3)$ ,  $\Rightarrow -3 + 39 = 13A - 4A$ ,  $\Rightarrow 9A = 36$ ,  $A = 4$ . Thus present age of Lucy is 16 years.

3 Marie is twelve years older than her brother Ben. Four years from now, Ben will be two-thirds as old as Marie. How old is Ben now?

A)10 B)20 C)30 D)40

Solution:

Let the present age of Ben and Marie be B and M. Given that Marie is twelve years older than Ben, which implies that  $M = B + 12$ ...(1). It is also given that After four years Ben is two third as old as Marie, which implies  $B + 4 = \frac{2}{3}(M + 4)$ ...(2)Substitute (1) in (2), we get  $B + 4 = \frac{2}{3}(B + 12 + 4) \Rightarrow 3B + 12 = 2(B + 16)$ ,  $\Rightarrow 3B + 12 = 2B + 32$ ,  $\Rightarrow B = 32 - 12 = 20$ . Hence present age of Ben is 20.

4. Mary's age and Bob's age are in the ratio 3:2. Eight years later, the ratio of their ages will be 4:3. Find their present ages.

A)18,12 B)33,22 C)36,24 D)24,16

Solution:

Let the present age of Mary and Bob be M and B. Given that the age of these are in the ratio 3:2, which implies that  $M/B = 3/2$ ,  $\Rightarrow M = 3/2B$ ...(1)it is also given that after eight years later their ages will be in the ratio 4:3. thus  $(M+8)/(B+8) = 4/3$ ,  $\Rightarrow 3M + 24 = 4B$

+ 32...(2) on substituting (1) in (2) we get  $B = 16$  and  $M = 24$ . Thus the present age of Mary and Bob is 24 and 16 years.

5. In 18 years, Jenny will be three times as old as she is now. How old is she?

A) 9 B) 10 C) 11 D) 12

Solution:

Let  $J$  be the age of Jenny after 18 years. Given that in 18 years Jenny will be 3 times as old as she is now, which implies that  $J = 3(J - 18)$ ,  $\Rightarrow J = 3J - 54$ . On simplification we get  $J$  to be 27 which is the age after 18 years. Therefore the present age of Jenny is  $27 - 18 = 9$ .

6. Ricardo is 4 years less than twice as old as his sister. The sum of their ages is 20. How old is Ricardo?

A) 9 B) 10 C) 11 D) 12

Solution:

Let  $R$  be the present age of Ricardo and  $S$  be his Sister. Given that Ricardo is 4 years less than twice as old as his Sister, which implies that  $R - 4 = 2S$ ...(1) It is also given that sum of their ages is 20,  $\Rightarrow R + S = 20$ ...(2) On Simplification we get  $R = 12$ . Thus the present age of Ricardo is 12 years.

7. Kim is 3 times as old as she was 2 years ago. How old is she?

A) 5 B) 10 C) 3 D) 12

Solution:

Let the present age of Kim be  $K$ . Given that Kim is 3 times as old as she was 2 years ago, which implies  $K = 3(K - 2)$ . On simplification we get  $K = 3$ . Hence Kim is three years old now.

8. In 20 years, John will be 5 times as old as he is now. How old is he?

A) 5 B) 6 C) 7 D) 8

Solution:

Let  $J$  be the age of John after 20 years. Given that John will be 5 times as old as he is now, which implies that  $J = 5(J - 20)$ . On simplification we get  $J = 25$ . Thus present age of John is  $J - 20 = 25 - 20 = 5$  years.

9. Shawn is  $\frac{4}{5}$ th as old now as he will be in 7 years. How old is he now?

A) 37 B) 36 C) 35 D) 28

Solution:

$$\frac{4}{5}(X+7) = X$$

$$4x+35 = 5x$$

$$X = 35 \text{ ( Incorrect )}$$

Hey Brintha, your approach is correct, but you did a calculation mistake!!

$$4/5(X+7) = x$$

$$4(X+7) = 5X$$

$$4X+28 = 5X$$

$$X = 28$$

10 Jeff is two years younger than Carrie. 12 years ago, Carrie was twice as old as Jeff. How old is Jeff now?

A) 21 B)16 C)22 D)32

Solution:

age 12 yrs ago

Jeff  $x-2$   $x-2-20$

Carrie  $x$   $x-20$

$$x-20 = 2(x-22)$$

$$x-20 = 2x - 44$$

$$x = 24$$

$$\text{Jeff age} = 24-2 = 22 \text{ ( Incorrect )}$$

In this question, instead of taking 12 years, you have deducted 20!!

So, it should be

$$x - 12 = 2 (x - 14)$$

$$x - 12 = 2x - 28$$

$$x = 28 - 12$$

$$x = 16$$

If carrie's age is 16, Jeff's age =  $16 - 2 = 14$

Therefore 14 is the correct answer.

11. Steve is twice as old as Sylvie. Sylvie is three years older than Jacob. 4 years ago, Sylvie was twice Jacob's age. How old is Sylvie?

A)11 B) 12 C)10 D) 15

Solution:

Steve  $2x$   $2x-4$

Sylvie  $x$   $x-4$

Jacob  $x-3$   $x-3-4$

$$x-4 = 2(x-7)$$

$$x - 4 = 2x - 14$$

$$x = 10.$$

12. Karen is twice as old as Lori. Three years from now, the sum of their ages will be 42. How old is Karen?

A)24 B)62 C)29 D) 31

Solution:

A)24 B)62 C)29 D) 31

Age After 3 yrs

Karen  $2x$   
 Lori  $x + 3$   
 $2x + 3 + x + 3 = 42$   
 $3x + 6 = 42$   
 $x = 12$   
 Karen age  $= 2 * 12 = 24$ .

13. In January of the year 2000, I was thirteen times as old as my son William. In January of 2009, I was four times as old as him. How old was my son in January of 2000?

A)6 B)7 C)3 D)5

Solution:

A)6 B)7 C)3 D)5  
 2000 2009  
 Mother  $13x$   
 Son  $x + 9$   
 $13x + 9 = 4x + 36$   
 $9x = 27$   
 $x = 27/9 = 3$ .

14. In three more years, Miguel's grandfather will be six times as old as Miguel was last year. When Miguel's present age is added to his grandfather's present age, the total is 68. How old is the grandfather now?

A)55 B)56 C)57 D)58

Solution:

Miguel age is  $x$  and grandfather age is  $y$   
 $x + y = 68$   
 $x = 68 - y$  --- (1)  
 $y + 3 = 6(x - 1)$  from problem  
 Sub  $x = 68 - y$  in eq 1  
 $y + 3 = 6(68 - y - 1)$   
 $y + 3 = 408 - 6y - 6$   
 $y = 57$ .

15. Pat and Chris have the same birthday. Pat is twice as old as Chris was when Pat was as old as Chris is now. If Pat is 24 now, how old is Chris now?

A)15 B)16 C)17 D)18

Solution:

Let us take the current age of Chris be " $X$ " and it is given current age of Pat is 24.

It is also given, Pat is twice as old as Chris, when Pat was as old as Chris now.

It means, Pat is twice as old as Chris, when Pat's age is " $X$ "

If the current age of Pat is 24, then at that time, the age of Pat  $= X$ .

So, the difference in the time period of Chris from previous age to current age =  $24 - X$ .

Now consider Chris,

The current age of Chris  $X$

His age before the period  $(24 - X)$

$$\rightarrow X - (24 - X)$$

$$\rightarrow 2X - 24$$

In that time period, Pat is twice as old as Chris

$$X = 2 [ 2X - 24 ]$$

$$X = 4X - 48$$

$$3X = 48$$

$$X = 16$$

16. Dorothy is 6 years older than Ricardo. The product of their present ages is twice what the product of their ages was 6 years ago. How old is Dorothy?

A)24 B)30 C)35 D)40

Solution:

Present age 6 yrs ago

Dorothy

Richardo

$$X + 6$$

$$x$$

$$X + 6 - 6$$

$$x - 6$$

$$X(x + 6) = 2(x(x - 6))$$

$$X^2 + 6x = 2x^2 - 12x$$

$$18x = x^2$$

$$18 = x$$

$$\text{Dorothy age} = 18 + 6 = 24$$

17. When Gary and Rowena were married, Rowena was two years younger than Gary.

How old was Gary on his wedding day if sixteen years before his wedding he was twice as old as Rowena was the?

A)21 B) 22 C) 23 D) 20

Solution:

Age 16 yrs before

Rowena

Gary

$$x-16 = 2(x-18)$$

$$x = 20$$

18. Riza is 25 when her first son was born, today the sum of their ages is 105. how old is her son now?

A) 37 B) 38 C) 39 D) 40

Solution:

Son age =  $x$

Riza age is  $x+25$

$x-2$

$x$

$$x-2-16$$

$$x-16$$

$$\text{Sum of age} = x+x+25 = 105$$

$$x = 40$$

19. The age of  $B$  is half the sum of the ages of  $A$  and  $C$ . If  $B$  is 2 years younger than  $A$  and  $C$  is 32 years old, then the age of  $B$  must be.

A) 32 B) 34 C) 36 D) 38

Solution:

$$a-2 = a+32/2$$

$$2a-4 = a+32$$

$A = 36$  and  $B$  is 2 yrs younger than  $A$  . so  $B = 34$ .

20. The ages of three people are such that the age of one person is twice the age of the second person and three times the age of the third person. If the sum of the ages of the three people is 33, then the age of the youngest person is.

A) 5 B) 6 C) 7 D) 8

Solution:

Let the age of a person be  $y$

If the age of the first person should be twice the age of second person , then age of second person

$$= y/$$

$$2$$

Like wise, if the age of the first person should be thrice the age of the third person, then the age of

the

third person =  $y/3$

Now, we know,  $y + y/2 + y/3 = 33$

$$(6y + 3y + 2y) / 6 = 33$$

$$6y + 3y + 2y = 198$$

$$11y = 198$$

$$y = 18$$

So, the youngest =  $y/3 = 18/3 = 6$  years.