

[HW] Math Hw(yay)

16. Let's denote the three consecutive even natural numbers as n , $n+2$, and $n+4$. The sum of these numbers is given as 48:

$$n + (n+2) + (n+4) = 48$$

$$3n + 6 = 48$$

$$3n = 48 - 6$$

$$3n = 42$$

$$n = 42/3$$

$$n = 14$$

$$\text{First Number} = n = 14$$

$$\text{Second number} = n+2 = 16$$

$$\text{Third Number} = n+4 = 18$$

So, the three consecutive even natural numbers are 14, 16, and 18.

17. Let the present ages of Ankita and Nikki be $7x$ and $2x$ respectively. Eight years after, their ages will be increased by 8, and the new ratio will be 5:2:

$$(7x+8) = 5$$

$$\text{-----} -$$

$$(2x+8) = 2$$

Cross-multiply to solve for x :

$$2(7x + 8) = 5(2x + 8)$$

$$14x + 16 = 10x + 40$$

$$14x - 10x = 40 - 16$$

$$4x = 24$$

$$x = 24/4$$

$$x = 6$$

So, Ankita's present age is $7 \times 6 = 42$ years, and Nikki's present age is $2 \times 6 = 12$ years.

18. The person borrowed Rs. 45000 at 8% per annum for 2 years. The interest can be calculated using the formula $(PTR)/100$, where P is the principal amount, R is the rate of interest, and T is the time in years.

$$\begin{aligned} (PTR)/100 &= (45000 \times 8 \times 2)/100 \\ &= 7200 \end{aligned}$$

The total amount to be repaid is $45000 + 7200 = 52200$. The person repaid Rs. 50000 in cash, so the remaining amount is given by $52200 - 50000 = 2200$. This remaining amount is the price of the watch. Therefore, the price of the watch is Rs. 2200.