

## Case Study on Algebraic Expressions and Comparing Quantities

### VIII

- A. A playground is in shape of a square. The area of the square PQRS is  $256 \text{ m}^2$  with each side  $(x + 2) \text{ m}$ . One day Suraj along with his two friends Ajay and Aman went to play there with bicycle. Someone stole Suraj bicycle, but Ajay and Aman helped him by contributing  $\text{₹}(4a + 60)$  and  $\text{₹}(6a + 10)$  respectively, to buy a new bicycle. The cost of bicycle was  $\text{₹}4200$ .

On basis of this information given in passage answer following questions.

- Q. 1. Find the value of  $x$ .
- Q. 2. Find the side of square shaped ground?
- Q. 3. What is the value of  $a$ ?
- Q. 4. What was the amount given by Ajay and Aman to Suraj?
- Q. 5. What is the perimeter of the playground?

- B. Rahul borrowed a Sum of Rs 12000 at a certain rate for 3 years Compounded annually. At the end of 3 Years, he paid interest of Rs 3972. During these 3 Years, he bought a TV worth Rs 12000 whose value depreciated by 5% each year.

From the above information answer the following questions:-

- (1) What is the rate of interest of the sum lend to Rahul?
- (2) Find the difference between the SI & CI of the Sum for 3 Yrs?
- (3) What is the value of the TV bought by Rahul at the end of 3 yrs.

### Answer

A.

1. 14, 2. 16 m, 3. 413, 4. ₹1712, ₹2488 5. 64m

B.

1. 10%, 2. ₹372, 3. ₹10288.5