Instructions for students: The notes provided must be copied to the Maths copy and then do the homework in the same copy.

Chapter 9

Linear Equations- part 2

Solving word problems:

Exercise 9.2

6. Let the three consecutive natural numbers be x, x+2 and x+4.

$$A/Q, \quad x+(x+2)+(x+4) \quad = \quad 87$$

$$\Rightarrow 3x+6 \quad = \quad 87$$

$$\Rightarrow 3x \quad = \quad 87-6$$

$$\Rightarrow 3x \quad = \quad 81$$

$$\Rightarrow x \quad = \quad \frac{81}{3}$$

$$= \quad 27$$

Required odd numbers are, 27, 29 and 31.

12. Let my present age be x.

4 years ago my age was $x - 4$

After 12 years my age will be $x + 12$

$$A/Q, \quad x + 12 \quad = \quad 3(x - 4)$$

$$\Rightarrow x + 12 \quad = \quad 3x - 12$$

$$or \quad 3x - 12 \quad = \quad x+12$$

$$\Rightarrow 3x - x \quad = \quad 12+12$$

$$\Rightarrow 2x \quad = \quad 24$$

$$\Rightarrow x \quad = \quad \frac{24}{2} \quad =12$$

My present age is 12.

14. Let the breadth of the rectangular plot be x metres.

$$Length \quad = \quad 3x - 6$$

Perimeter = 148m

2(l+b) = 148m

A/Q, 2(3x – 6 + x) = 148

$\Rightarrow$ 2(4x – 6) = 148

$\Rightarrow$ 4x – 6 = $\frac{148}{2}$

$\Rightarrow$ 4x – 6 = 74

$\Rightarrow$ 4x = 74 + 6 = 80

$\Rightarrow$ x = $\frac{80}{4}$ = 20

breadth = 20 m

length = 3×20 - 6

= 54 m

Home work: Solve Exercise **9.2 Questions 2, 4, 5, 9, 11, 13** in the Maths copy.

Practise all questions from **Exercise 9.2**.