LINEAR EQUATION IN ONE VARIABLE

APPLICATION OF LINEAR EQUATION TO PRACTICAL PROBLEM

EXERCISE

Q.1 Saurabh has Rs 34 in form of 50 paise and twenty-five paise coins. If the number of 25-paise coins be twice the number of 50-paise coins, how many coins of each kind does he have ?

Q.2 Arvind has Piggy bank. It is full of one-rupee and fifty-paise coins. It contains 3 times as many fifty paise coins as one rupee coins. The total amount of the money in the bank is ₹ 35. How many coins of each kind are there in the bank ?

Q.3 Kanwar is three years older than Anima. Six years ago, Kanwar's age was four times Anima's age. Find the ages of Knawar and Anima.

Q.4 Hamid has three boxes of different fruits. Box A weighs $2\ \frac{1}{2}$ kg more than Box B and Box C weighs $10\ \frac{1}{4}$ kg more than Box B. The total weight of the boxes is $48\frac{3}{4}$. How many kg does Box A weigh ?

Q.5 The sum of two numbers is 45 and their ratio is 7 : 8. Find the numbers.

Q.6 Divide ₹1380 among Ahmed, John and Babita so that the amount Ahmed receives is 5 times as much as Babita's share and is
3 times as much as John's share.

Q.7 The length of a rectangle exceeds its breadth by 4 cm. If length and breadth are each increased by 3 cm, the area of the new rectangle will be 81 cm^2 more than that of the given rectangle. Find the length and breadth of the given rectangle.

Q.8 An altitude of a triangle is five-thirds the length of its corresponding base. If the altitude were increased by 4 cm and the base be decreased by 2 cm, the area of the triangle would remain the same. Find the base and the altitude of the triangle.

Q.9 The perimeter of a rectangle is 13 cm and its width is $2\frac{3}{4}$ cm. Find its length.

Q.10 The present age of Sahil's mother is three times the present age of Sahil. After 5 years their ages will add to 66 years. Find their present ages.

Q.11 Bansi has 3 times as many two-rupee coins as he has five-rupee coins. If he has in all a sum of ₹77, how many coins of each denomination does he have ?

Q.12 The sum of three consecutive multiples of 11 is 363. Find these multiple.

ANSWER KEY

1. Thus, number of 50-paise coins = 34

Number of twenty-five paise coins = 68

2. Number of one rupee coins = 14, Number of 50 paise coins = 42.

3. Anima's age = 7 years Kanwar's age = 10 years.

4. Weight of box A = $14\ \frac{1}{2}$ kg

5. one number is 21 and, Other number = 24

6. Babita's share = ₹180,

Ahmed's share = ₹ 900

John's share = ₹300

7. Length of the given rectangle = 14 cm

Breadth of the given rectangle = 10 cm

8. Hence, base of the triangle = 12 cm.

Altitude of the triangle = 20 cm

9. The length of the rectangle is $3\frac{3}{4}$ cm

10. Sahil's present age is 14 years and his mother's age is 42 years. (You may easily check that 5 years from now the sum of their ages will be 66 years)

11. number of five-rupee coins = x = 7

and number of two-rupee coins = 21

(You can check that the total money with Bansi is ₹77)

12. $x = \frac{330}{3} = 110$