CLASS NOTES-ANSWERS

EXERCISE 4.4

1. Set up equations and solve them to find the unknown numbers in the following cases:

(a) Add 4 to eight times a number; you get 60.

(b) One-fifth of a number minus 4 gives 3.

(c) If I take three-fourths of a number and add 3 to it, I get 21.

(d) When I subtracted 11 from twice a number, the result was 15.

(e) Munna subtracts thrice the number of notebooks he has from 50, he finds the result to be 8.

(f) Ibenhal thinks of a number. If she adds 19 to it and divides the sum by 5, she will get 8.

(g) Anwar thinks of a number. If he takes away 7 from $\frac{5}{2}$ of the number, the result is 23

Answer:

(a) Let the number be *x*.

$8x + 4 = 60$

$8x = 60 - 4$

$8x = 56$

$x = \frac{56}{8}$

$x = 7$

(b) Let the number be *y*.

$\frac{y}{5} - 4 = 3$

$\frac{y}{5} = 3 + 4$

$\frac{y}{5} = 7$

$y = 7 \times 5$

$y = 35$

(c) Let the number be *x*.

$\frac{3x}{4} + 3 = 21$

$\frac{3x}{4} = 21 - 3$

$\frac{3x}{4} = 18$

$3x = 18 \times 4$

$x = \frac{18 \times 4}{3}$

$x = 24$

(d) Let the number be *x*.

$2x - 11 = 15$

$2x = 15 + 11$

$2x = 26$

$x = \frac{26}{2}$

$x = 13$

(e) Let the number be *x*.

$50 - 3x = 8$

$-3x = 8 - 50$

$-3x = -42$

$x = \frac{-42}{-3}$

$x = 14$

(f) Let the number be *z*.

$\frac{z+19}{5} = 8$

$z + 19 = 8 \times 5$

$z + 19 = 40$

$z = 40 - 19$

$z = 21$

(g) Let the number be *x*.

$\frac{5x}{2} - 7 = 23$

$\frac{5x}{2} = 23 + 7$

$\frac{5x}{2} = 30$

$5x = 30 \times 2$

$x = \frac{60}{5}$

$x = 12$

2. Solve the following:

(a) The teacher tells the class that the highest marks obtained by a student in her class is twice the lowest marks plus 7. The highest score is 87. What is the lowest score?

(b) In an isosceles triangle, the base angles are equal. The vertex angle is 40°. What are the base angles of the triangle? (Remember, the sum of three angles of a triangle is 180°).

(c) Sachin scored twice as many runs as Rahul. Together, their runs fell

two short of a double century. How many runs did each one score?

Answer:

(a) Highest score is 87.

Let the lowest marks be x

Highest marks obtained = 2x + 7

87 = 2x + 7

87 – 7 = 2x

80 = 2x

$x = \frac{80}{2}$

x = 40

(b) Let the base angle be b.

Since the triangle is isosceles, the other base angle will also be b.

Vertex angle is given 40°.

Since, the sum of three angles of a triangle = 180°

b + b + 40° = 180°

2b + 40° = 180°

2b = 180° - 40°

2b = 140°

$b = \frac{140}{2}$

b = 70°

(c) Let the present age of Smitha be x.

Age of her mother = 34 years

Two years from now Smitha age will be x + 2

$4(x + 2) = 34$

$4x + 8 = 34$

$4x = 34 - 8$

$4x = 16$

$x = 4$

(d) Let the score of Rahul be x,

and score of Sachin be 2x

$x + 2x = 198$

$3x = 198$

$x = \frac{198}{3}$

$x = 66$

So, Rahul's score = 66 runs

And Sachin's score = 2x = 132 runs

3. Solve the following:

(i) Irfan says that he has 7 marbles more than five times the marbles Parmit has. Irfan has 37 marbles. How many marbles does Parmit have?

(ii) Laxmi's father is 49 years old. He is 4 years older than three times Laxmi's age. What is Laxmi's age?

(iii) People of Sundargram planted trees in the village garden. Some of the trees were fruit trees. The number of non-fruit trees were two more than three times the number of fruit trees. What was the number of fruit trees planted if the number of non-fruit trees planted

was 77?

Answer:

(i) Number of marbles Parmit has 37.

Let the number of marbles Parmit has be x.

$5x + 7 = 37$

$5x = 37 - 7$

$5x = 30$

$x = \frac{30}{5}$

$x = 6$

Therefore, Parmit has 6 marbles.

(ii) Let the age of Laxmi be x.

Age of Laxmi's father be 49 years

$3x + 4 = 49$

$3x = 49 - 4$

$3x = 45$

$x = \frac{45}{3}$

$x = 15$

Therefore, Laxmi's age is 15 years.

(iii) Let the number of fruit tress be x.

Then the number of non-fruit trees are 3x + 2

$3x + 2 = 77$

$3x = 77 - 2$

$3x = 75$

$x = \frac{75}{3}$

x = 25

The number of fruit trees planted are 25.

4. Solve the following riddle:

I am a number, Tell my identity!

Take me seven times over And add a fifty!

To reach a triple century You still need forty!

Answer: Let the number be *x*.

$7x + 50 + 40 = 300$

$7x = 300 - 90$

$7x = 210$

$x = \frac{210}{7}$

x = 30

Therefore, the number is 30.