

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*.

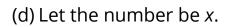
$$\frac{y}{5} - 4 = 3$$

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 $\frac{y}{5} = 3 + 4$ $\frac{y}{5} = 7$ $y = 7 \times 5$ y = 35

(c) Let the number be *x*.

$$\frac{3x}{4} + 3 = 21$$
$$\frac{3x}{4} = 21 - 3$$
$$\frac{3x}{4} = 18$$
$$3x = 18 \times 4$$
$$x = \frac{18 \times 4}{3}$$
$$x = 24$$



$$2x - 11 = 15$$

 $2x = 15 + 11$
 $2x = 26$
 $x = \frac{26}{2}$
 $x = 13$

(e) Let the number be *x*.

50 - 3*x* = 8 -3*x* = 8 - 50 - 3 x = -42







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 $x = \frac{-42}{-3}$ x = 14

(f) Let the number be *z*.

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

z + 19 = 8 × 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



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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

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

(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°

$$b + b + 40^{\circ} = 180^{\circ}$$

- 2b + 40° = 180°
- $2b = 180^{\circ} 40^{\circ}$
- 2b = 140°

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

(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



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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

$$x = \frac{198}{2}$$

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





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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 = 493x = 49 - 4

3x = 45

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

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
- 3 x = 75



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 $x = \frac{75}{3}$ x = 25

The number of fruit trees planted are 25.

4. Solve the following riddle:

I am a number,

Take me seven times over

To reach a triple century

And add a fifty! You still need forty!

Tell my identity!

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.