SHIKSHA CLASSES

Sub. : Maths	**Question Paper**	Marks : 20
Std. : VIIIth - S.B.	**12. Equations in one variable**	Time : 45 min.

Q.1 : A) Select the most appropriate Alternative. 02

1) The value of m if $9m - 81 = 0$.

    a) 7   b) 5   c) 9   d) 0

2) One number is thrice the other number. Their sum is 24. What is the equation ?

    a) $x + \dfrac{x}{3} = 8$ b) $x + 3x = 24$ c) $3x - x = 24$ d) $2x + 6x = 24$

: B) Solve the following. 01

1) Translate the following into mathematical statement :

"A number added to one-fourth of the number is equal to 15"

Q.2 : A) Solve any one of the following. (Activity) 02

1) Fill in the boxes to solve the following equations :

    i) $x - 2 = 7$

    $\therefore$ $x - 2 + \boxed{} = 7 + \boxed{}$

    $\therefore$ $x = \boxed{}$

    ii) $\dfrac{x}{3} = 4$

    $\therefore$ $\dfrac{x}{3} \times \boxed{} = 4 \times \boxed{}$

    $\therefore$ $x = \boxed{}$

2) Write correct numbers in the boxes given.

Length is 3 times the breadth

I am a rectangle.
My perimeter is   breadth
40 cm.   x

Perimeter of the rectangle = 40

$2(\boxed{}x + \boxed{}x) = 40$

$2 \times \boxed{}x = 40$

$\boxed{}x = 40$

$x = \boxed{}$

$\therefore$ Breadth of rectangle = $\boxed{}$ cm and Length of rectangle = $\boxed{}$ cm

: **B) Solve any one of the following.** 02

1) Solve the following equation : $\dfrac{y}{7} + \dfrac{y-4}{3} = 2$

2) Solve the following equation : $\dfrac{b+(b+1)+(b+2)}{4} = 21$.

Q.3 : **A) Solve any one of the following.(Activity)** 03

1) Ratna has ₹ 200 more than three times the amount Rafik has. If ₹ 300 from the amount with Ratna are given to Rafik, the amount with Ratna will be $\dfrac{7}{4}$ times the amount with Rafik. Find the initial amount with Rafik. To find the initial amount, complete the following acitivity.

Ans : Ratna has ₹ 200 more than three times the amount Rafik.

Let the initial amount with Rafik be ₹ x.

$\therefore$ Ratna has ₹ $\boxed{}$

₹ 300 from Ratna are given to Rafik.

$\therefore$ amount remaining with Ratna is

$$\boxed{}$$

$\therefore$ now Rafik has ₹ $(x + 300)$.

The amount with Ratna is $\dfrac{7}{4}$ times the amount with Rafik.

$\therefore$ $\dfrac{\text{amount with Ratna}}{\text{amount with Rafik}} = \dfrac{\boxed{}}{\boxed{}}$

$$\therefore \quad \frac{3x-100}{x+300} = \frac{\boxed{}}{\boxed{}}$$

$$\therefore \quad 4\boxed{} = 7\boxed{}$$

$$\therefore \quad 12x - 400 = 7x + 2100$$

$$\therefore \quad 12x - 7x + 2100$$

$$\therefore \quad 12x - 7x = \boxed{}$$

$$\therefore \quad 5x = \boxed{}$$

$$\therefore \quad x = \boxed{}$$

$\therefore$ initial amount with Rafik is ₹ $\boxed{}$

2) Fill in the boxs:

Anita's present age is x years.

Her mother is 30 years older than Anita.

$\therefore$ mother's present age is _____.

10 years ago, Anita's age was _____

and her mother's age was _____.

The ratio of Anita's age to her mother's age, 10 years ago was 1 : 7

$$\therefore \underline{} = \frac{1}{7}$$

$\therefore 7(\underline{}) = x + 20$

$\therefore 7x - 70 = x + 20$

$\therefore 7x - \underline{} = 20 + \underline{}$

$\therefore \underline{} = 90$

$\therefore x = 15$

Anita's present age is 15 years.

$\therefore$ mother's present age is _____ = _____ years.

: B) Solve any one of the following.   03

1) The ratio of weights of copper and zinc in brass (alloy) is 13:7. Find the weight of zinc in a brass utensil weighing 700 gm.

2) A Cricket player scored 180 runs in the first match and 257 runs in the second match. Find the number of runs he should score in the third match so that the average of runs in the three matches be 230.

Q.4 : Solve any one of the following. 04

    1) There are 90 multiple choice questions in a test, suppose you get two marks for every correct answer and every question you leave unattempted or answer wrongly, one mark is deducted from your total score of correct answers. If you get 60 marks in the test, then how many questions did you answer correctly ?

    2) In a two digit number, The digit at the ten's place is twice the digit at units's place. If the number obtained by interchanging the digits is added to the original number, the sum is 66. Find the original number.

Q.5 : Solve any one of the following. 03

    1) Divide 34 into two parts in such a way that $\left(\dfrac{4}{7}\right)^{th}$ of the part is equal to $\left(\dfrac{2}{5}\right)^{th}$ of the other.

    2) Find three consecutive whole numbers whose sum is more than 45 but less than 54.

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