CLASS X Maths continuation .....

CHAPTER 5 (QUADRATIC EQUATIONS IN ONE VARIABLE)

General direction for the students :-Whatever be the questions solved , everything must be copied in the Maths Copy and then do the Home work in the same Copy.

Q15 i) Solve $\sqrt{3}x^2 + 10x + 7\sqrt{3} = 0$

$\Rightarrow \sqrt{3}x^2 + 7x + 3x + 7\sqrt{3} = 0$ by *breaking the middle term*

$\Rightarrow x(\sqrt{3}x + 7) + \sqrt{3}(\sqrt{3}x + 7) = 0$

$\Rightarrow (\sqrt{3}x + 7)(x + \sqrt{3}) = 0$

$\Rightarrow x = -\frac{7}{\sqrt{3}}\ , -\sqrt{3}$ *are the roots.*

Q 20 ii) . Solve $\frac{x+1}{x-1} + \frac{x-2}{x+2} = 3$

$\Rightarrow (x + 1)(x + 2) + (x - 2)(x - 1) = 3(x - 1)(x + 2)$ *by simplification*

$\Rightarrow x^2 + 3x + 2 + x^2 - 3x + 2 = 3x^2 + 3x - 6$

$\Rightarrow x^2 + 3x - 10 = 0$

$\Rightarrow (x + 5)(x - 2) = 0$

$\Rightarrow x = -5\ , 2$ are the roots.

Q24 i) Solve $\sqrt{3x + 4} = x$

$\Rightarrow 3x + 4 = x^2$ *by squaring*

$\Rightarrow x^2 - 3x - 4 = 0$

$\Rightarrow (x - 4)(x + 1) = 0$

$\Rightarrow x = 4\ , -1$

Clearly $x = 4$ satisfies the equation but $x = -1$ does not satisfies the equation.

$\Rightarrow x = 4$ is the only root of the given equation.

HOME WORK :- Left over questions from the exercise 5.2. Questions from 11 to last.