Unit 7: Linear Equations and Inequalities

Overview

Linear Equation:

A linear equation in one unknown variable x is an equation of the form ax + b = 0, where a,b $\in$R and a $\neq$ 0.

Example:

(i) 5x – 3 = 0

(ii) $\frac{1}{2}x+18=0$

Radical equations:

When the variable in an equation occurs under a radical the equation is called a radical equation.

Example:

(i) $\sqrt{2x-3}-7=0$

Absolute value:

The absolute value of a real number 'a' denoted by lal, is defined as

$$|a|=\begin{cases} a, & \text{if } a\geq 0 \\ -a, & \text{if } a<0 \end{cases}$$

$|6|=6,$

e.g., $|0|=0$

$|-6|=-(-6)=6$

Extraneous Roots:

If the solutions (roots) obtained from the equation does not satisfy the original equations are called extraneous roots.

Linear inequality:

A linear inequality in one variable x is an inequality in which the variable x occurs only to the first power and has the standard form. $ax+b<0,\ a\neq 0\ a,b\in R$ we may replace the symbol <by>, $\leq$or $\geq$also.

Inconsistent equation:

An inconsistent equation is that whose solution set is ϕ.

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Report any mistake at freeilm786@gmail.com