Linear equation \( ax + b = 0 \)

1. **If the** \( x \) **term is negative, take it to the other side, so it becomes a positive.**

   **Example 1.**
   
   
   \[
   4 - 3x = 2 \\
   4 = 2 + 3x \\
   2 = 3x \\
   x = \frac{2}{3}
   \]

2. **If there are** \( x \) **terms on both sides, collect them on one side.**

   **Example 2.**
   
   \[
   2x - 6 = 4 - 3x \\
   2x + 3x = 4 + 6 \\
   5x = 10 \\
   x = 2
   \]

3. **If there is a fraction in the** \( x \) **term, multiply out to simplify the equation.**

   **Example 3.**
   
   \[
   \frac{2x}{3} = 10 \\
   2x = 30 \\
   x = 15
   \]

4. **Simplify, expand, collect like-terms.**

   **Example 4.**
   
   \[
   x - 2(x - 1) = 1 - 4(x + 1) \\
   x - 2x + 2 = 1 - 4x - 4 \\
   3x = -5 \\
   x = -\frac{5}{3}
   \]

5. **Sometimes equation does not look like a linear, although it is.**

   **Example 5.**
   
   \[
   (x + 3)^2 = (x + 2)^2 + 9 \\
   x^2 + 6x + 9 = x^2 + 4x + 4 + 9 \\
   2x = 4 \\
   x = 2
   \]

6. **Solving equations using fractions (cross-multiplication).**

   **Example 6.**
   
   \[
   \frac{x + 4}{4} = \frac{2x + 3}{3} \\
   3(x + 4) = 4(2x + 3) \\
   3x + 12 = 8x + 12 \\
   x = 0
   \]