SOLVING LINEAR EQUATIONS
AND INEQUATIONS: SUMMARY

For Year level: 10, 11

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This material relates to:

Solve problems involving linear equations, including those derived from formulas(ACMNA235)

Solve linear inequalities and graph their solutions on a number line (ACMNA236)

Rationale for Use

It is expected that students will have access to an array of practice material in the form of text books or school prepared exercises. The purpose of the AMSI materials is to support the development of **understanding** and **reasoning** about the concepts involved. They complement and enhance the teacher instruction elements of normal classroom instruction.

Short Explanation

Linear equations are a way of expressing the connection between quantities algebraically like $y = 2x + 3$ or $5 = 7x - 2$. All linear equations have variables (like x and y) where there are no powers. In-equations, like $y < 2x + 3$ and $5 \geq 7x - 2$, swap the equals sign for greater and less than signs.

List of Resources

1) Recap of Linear Equations – Video
2) DESMOS (online) Linear Inequalities on the Number Line
3) AMSI SAM Module Linear Equations and In-equations
4) Khan Academy Linear Equations and In-equations
5) Exploring Linear Equations – Geogebra interactive
6) Solving Linear Equations – Geogebra interactive
7) Solving Linear In-equations I – Geogebra interactive
8) Solving Linear In-equations II – Geogebra interactive

The Geogebra interactives are also available online here:

FURTHER INFORMATION

If you are unsure of any of the ideas you can revise them:

- Parts of a linear equation and what they do.
- Rearranging equations and formulas.
- Substituting values into equations.