ASPIRE TO POWER LEARNING

Year 9 | Algebra

Linear equations and graphs

Learn and practise | Free preview

A sample from this topic. The complete topic collection contains three different resources and worked solutions.

Read the explanation and worked example. Show your working; use a calculator only where asked.

What you will practise

- Solve linear equations and sketch lines in different algebraic forms.
- Explain a method and check the reasonableness of a result.

Useful starting skills: Use the prerequisite operations and representations shown in the worked example.

A linear equation in x and y can often be rearranged to $y=mx+c$. Two distinct points determine its graph.

To solve a one-variable equation, keep operations balanced and collect variable terms. Substitution checks both algebraic solutions and plotted points.

Worked example

Sketch $2x+y=6$ using intercepts.

At $x=0$, $y=6$.

At $y=0$, $x=3$; join the two points.

Answer: Line through (0,6) and (3,0)

Try it yourself

Name: _____ Date: _____

1. Solve $4x-7=2x+9$.

2. Rearrange $3x+y=12$ into slope-intercept form.

Answers and explanations

Check the method as well as the final answer. An alternative correct method is also valid.

1. $x=8$

Subtract $2x$ then add 7.

2. $y=-3x+12$

Subtract $3x$.

Curriculum reference: VC2M9A03

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