

Solve linear inequalities and simultaneous linear equations in 2 variables...

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Learning intention

- solve linear inequalities and simultaneous linear equations in 2 variables; interpret solutions graphically and communicate solutions in terms of the situation

Teach and model

- investigating situations involving linear equations in context, such as multiple quotes for a job, or profit and loss; solving the equations graphically, giving solutions in...
- describing the solution of simultaneous equations within the context of the situation
- graphing regions corresponding to inequalities in the Cartesian plane; for example, graphing $2x+3y<24$ and verifying using a test point such as (0, 0)

Check understanding

- Explain the main idea in solve linear inequalities and simultaneous linear equations in 2 variables... using an example.
- Show the idea in a second way: with words, a model, a diagram or symbols.
- Apply the idea to a short unfamiliar situation and justify the result.

Teaching cautions

- Ask the student to explain their choice, not only state an answer.
- Check that key vocabulary is understood in a new example.
- Mix representations so the skill is transferred rather than copied.

Quick lesson sequence

- Connect to prior knowledge and introduce the key vocabulary.
- Model one clear example, then solve a second example together.
- Finish with an independent check and a short student explanation.