

Establish properties of quadrilaterals using congruent triangles and angle properties...

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Learning intention

- establish properties of quadrilaterals using congruent triangles and angle properties, and solve related problems explaining reasoning

Teach and model

- establishing the properties of squares, rectangles, parallelograms, rhombuses, trapeziums and kites using geometric properties and proof, such as the sum of the...
- identifying properties of quadrilaterals related to side lengths, parallel sides, angles, diagonals and symmetry
- applying the properties of triangles and quadrilaterals to construction designs such as car jacks, scissor lifts, folding umbrellas, toolboxes and cherry pickers

Check understanding

- Explain the main idea in establish properties of quadrilaterals using congruent triangles and angle properties... 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.