How to Draw an Ellipse on the Floor with String and Stakes

Original tasks 1, 2 / independent work

Task 1

Hypothetical example: major axis 300 cm, minor axis 180 cm. Compute focal distance and string loop length.

Task 2

Hypothetical example: major axis 500 cm, minor axis 300 cm. Where do the stakes go relative to the centre, and what loop length is needed?

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Original tasks 3, 4 / independent work

Task 3

Hypothetical example: a traced point is 170 cm from stake A and 130 cm from stake B. The major axis is 300 cm. Does the point lie on the ellipse?

Task 4

Hypothetical example: major axis 360 cm, minor axis 216 cm. A helper places stakes 180 cm from the centre. Is that correct?