Draw an Old Balance Scale: Beam, Pan, and Base Construction

Original task 1 / independent drawing and calculation

Task 1

On a 15 cm by 20 cm area, draw a base trapezoid 6 cm wide at the bottom, 4 cm at the top, and 1.5 cm tall. Add a vertical column 8 cm tall and 1 cm wide at the base center. State one measurement you would check.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 2 / independent drawing and calculation

Task 2

Draw a horizontal beam 10 cm long and 0.8 cm thick with its midpoint on a vertical center line. Add a pivot circle at the midpoint. Describe how you check beam symmetry.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 3 / independent drawing and calculation

Task 3

From one end of a beam, draw three suspension cords of equal length down to a shallow pan rim. The cords are 4 cm long in this hypothetical example. Describe how to check the pan is level.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 4 / independent drawing and calculation

Task 4

Draw a complete old balance scale with one base, one column, one beam, and one pan. Use a center line and state your symmetry tolerance. Then label the base with the word BASE using uppercase letters whose baseline is at the bottom and midline at the top.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

Full drawing sheet / reusable blank workspace

Reusable full drawing sheet for Tasks 1 to 4. Print another copy when needed. Keep all original task measurements; if a task specifies larger paper, use that paper size.