Draw a Law Balance Scale: Beam, Pans, and Pillar

Topic reference / ordinary illustration



Ordinary topic reference. Hypothetical dimensions in the four tasks are supplied in their own text; this illustration is not their measured answer.

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Worked example / complete source key

Using the example dimensions, calculate the total width of the drawing from the left pan edge to the right pan edge. The beam is 12 cm long, each pan is 3 cm wide and centered under a beam end, and the beam ends are 6 cm from the center line.

Answer: The left pan extends 1.5 cm beyond the left beam end, and the right pan extends 1.5 cm beyond the right beam end. Total width = 12 cm + 1.5 cm + 1.5 cm = 15 cm.

Reason: Each pan is centered under a beam end, so half the pan width (1.5 cm) extends outward beyond the beam end. Adding both overhangs to the beam length gives the total width.

Check: Measure the drawn width from left pan edge to right pan edge and compare to 15 cm; also confirm each pan overhang is 1.5 cm.