Draw Tree Roots: Spreading Lines and Soil Line

Ordinary topic reference / separately checked pixels



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Original worked example / unchanged complete key

Prompt: On a 20 cm wide paper, draw a soil line 7 cm from the bottom. Draw a trunk base centered on the soil line. Choose a total spread width of 12 cm. Draw three main roots and two secondary roots. Label the parts. Check that at least two main roots extend beyond 6 cm from center.

Answer: The drawing shows a horizontal soil line 7 cm from the bottom. The trunk base meets the soil line at the center point. Three main roots spread outward and downward: one reaches 5 cm left, one reaches 6 cm right, and one reaches 4 cm left. Two secondary roots branch from the main roots. Labels are placed outside the root area. Check: half of the 12 cm spread width is 6 cm. The tip distances are 5 cm, 6 cm, and 4 cm; none is strictly greater than 6 cm, so zero roots qualify and the check fails. Adjustment: reduce the spread width to 8 cm, so half is 4 cm; then the 5 cm and 6 cm roots both exceed 4 cm and the check passes. Alternatively, extend the 5 cm and 6 cm roots to 7 cm each while keeping the 12 cm spread, so two roots exceed 6 cm. After either adjustment, at least two main roots extend beyond half the chosen spread width.