Peony Outline Drawing: Layered Petal Construction

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

Draw a three-layer peony outline with eight outer petals, six middle petals, and four inner petals, using a center circle of diameter 2 cm and an outer boundary circle of diameter 20 cm.

Answer: Draw the center circle (2 cm) and outer boundary (20 cm). Radius grows from 1 cm to 10 cm; each of three equal bands is $(10 - 1)/3 = 3$ cm, so intermediate radii are 4 cm and 7 cm and intermediate diameters are 8 cm and 14 cm. Draw eight Layer 1 petals at 45-degree spacing with bases near the 14 cm ring and tips near the 20 cm ring. Draw six Layer 2 petals at 60-degree spacing, offset 22.5 degrees (half of the 45-degree Layer 1 spacing), bases near the 8 cm ring. Draw four Layer 3 petals at 90-degree spacing, offset 30 degrees (half of the 60-degree Layer 2 spacing), bases near the center circle. This offset prevents alignment with Layer 2 only; some Layer 3 petals may still line up with Layer 1 petals, which is acceptable here. Leave the center circle empty. Check that extreme distances from center differ by no more than 2 cm and that outer petal outer width is at least twice base width.

Reason: The ring diameters divide the radius into three equal bands: from 1 cm to 4 cm, 4 cm to 7 cm, and 7 cm to 10 cm. Petal counts decrease inward so the flower looks full. Offsetting each layer by half the spacing of the layer immediately outside it prevents petals from lining up directly with that adjacent layer, which would create a spoke-like look between neighbors. Alignment with Layer 1 is not prevented by this rule and is accepted under the convention.

Check: Measure the four extreme distances from center to outermost tips; they should be within 2 cm of each other. Confirm eight, six, and four petals in the three layers. Confirm no same-layer petals cross.