Planter Drawing: Pot Shape, Soil Line, and Plant Stems

Original tasks 1, 2 / complete keys

Task 1

A planter has a rim width of 9 cm and a base width of 5 cm. Calculate the taper per side and state where the soil line should sit relative to the rim.

Answer: Taper difference is 4 cm, so each side tapers 2 cm. The soil line should sit below the rim and touch both inner walls; a hypothetical depth of 1.5 cm below the rim is reasonable.

Reason: Subtract base from rim to get total taper, then divide by two for per-side taper. The soil line placement is a relationship rule, not a fixed number.

Check: Re-subtract 9 minus 5 equals 4, divide by 2 equals 2. Confirm the soil line's ends meet both inner walls in the drawing.

Task 2

Three stems start on a soil line at 2 cm, 6 cm, and 8 cm from the left inner wall. Are the gaps even? If so, suggest one shift to make them uneven while keeping all starts on the soil line.

Answer: Gaps are 4 cm and 2 cm, so they are already uneven. No shift is required; if a more balanced look is wanted, move the middle stem from 6 cm to 5 cm, giving gaps of 3 cm and 3 cm, which is even again, so instead move it to 4.5 cm for gaps of 2.5 cm and 3.5 cm.

Reason: Subtract consecutive positions to find gaps. The first pair is already uneven, so the drawing already avoids a comb look. Any shift must keep the start on the soil line.

Check: Subtract 6 minus 2 equals 4 and 8 minus 6 equals 2. After any shift, re-subtract consecutive positions and confirm each value is greater than zero and the start remains on the soil line.

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Original tasks 3, 4 / complete keys

Task 3

A cylindrical pot has a rim width of 7 cm and a base width of 7 cm. A soil line is drawn 1 cm below the rim. Two stems start at 2 cm and 5 cm from the left inner wall. Describe the taper check and whether the stem spacing is even.

Answer: Taper difference is 0 cm, so the pot is cylindrical and symmetric by definition. Stem gaps are 3 cm, a single gap, so evenness is not meaningful with two stems; the spacing is acceptable as long as both starts are on the soil line.

Reason: For a cylindrical pot, rim minus base equals zero, so no per-side taper exists. With two stems there is only one gap, so the comb-look concern does not apply.

Check: Subtract 7 minus 7 equals 0. Subtract 5 minus 2 equals 3. Confirm both stem starts lie on the soil line and the soil line touches both inner walls.

Task 4

A planter drawing shows a soil line that ends 1 cm short of the right inner wall and a stem that starts at the rim. Identify both faults and state the correction for each.

Answer: Fault one: the soil line does not touch the right inner wall; extend its right end to meet the wall. Fault two: the stem starts at the rim instead of the soil line; erase the lower end and redraw it beginning on the soil surface.

Reason: The soil line must contact both inner walls to read as a surface inside the pot. Stems must begin on the soil line so the plant appears rooted in the soil.

Check: Trace the soil line to both inner walls and confirm contact. Trace each stem downward and confirm its lowest point lies on the soil line, not on the rim.

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Source rubric / reflection

- [ ] Pot silhouette tapers consistently and is symmetric about the midline.
- [ ] Soil line touches both inner walls and reads as a surface inside the pot.
- [ ] Every stem begins on the soil line, not at the rim.
- [ ] Stem spacing is uneven but balanced, and stems lean naturally.
- [ ] Leaves are placed at varied heights without hiding the soil line completely.
- [ ] Valid alternatives are accepted: cylindrical or tapered pots, curved or straight soil lines, and different stem counts within the stated range.

Reflection: What did you check, what did you change, and what will you try next?