Draw a Spooky House: Tilted Walls, Dark Windows, Bare Tree

Original tasks 1, 2 / complete keys

Task 1

Draw a spooky house with a baseline at 4 cm, x-height 5 cm, wall height 10 cm measured vertically from the baseline, wall tilt 6 degrees left, and one dark window centered on the left wall. Describe the window width and margin check.

Answer: Baseline 4 cm, midline 9 cm. Left wall tilts 6 degrees left; wall height is 10 cm measured vertically from the baseline, so the wall top is at 4 + 10 = 14 cm (slanted length is about 10/cos 6 degrees, roughly 10.06 cm). Each height band is 10 / 3, about 3.33 cm; window height is 80% of one band, about 2.67 cm, leaving about 0.33 cm clearance above and below inside the middle band. Window width one third of the full wall width, centered, with equal side margins within 0.5 cm, filled dark.

Reason: The x-height sets the midline, the tilt is recorded from vertical, and the window width rule keeps the window inside the wall.

Check: Measure wall-top height from baseline, window side margins, and confirm the window does not cross the wall line.

Task 2

Draw a spooky house with two walls tilted 10 degrees right, a roof peak 3 cm above the wall tops, and a bare tree with two fork levels. State the fork rule check.

Answer: Walls tilt 10 degrees right and tops are level within 1 cm. Mark the midpoint between the wall tops and place the roof peak above it within 0.5 cm. Tree has two fork levels; each child branch is at least half its parent, so terminal branches are at least one quarter of trunk length (1/2 squared = 1/4).

Reason: Consistent tilt and a centered peak create the spooky lean, while the fork rule keeps the tree readable.

Check: Measure peak offset from the wall-top midpoint and compare parent and child branch lengths; confirm the shortest terminal branch is at least one quarter of the trunk.

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Original tasks 3, 4 / complete keys

Task 3

Draw a spooky house with three dark windows in the middle band, window width 2 cm, gap 1 cm, wall width 12 cm, and wall tilt 7 degrees right. Check total window span against wall width.

Answer: Three windows span 2+1+2+1+2 = 8 cm. If wall width is 12 cm, side margins total 4 cm, so each margin is 2 cm, matching within 0.5 cm. Window height follows the 80%-of-one-band rule: with a recorded vertical wall height, divide by 3 to get the band height, then multiply by 0.8.

Reason: Simple arithmetic confirms the windows fit inside the wall with equal margins.

Check: Add window widths and gaps, subtract from wall width, and divide by two for margins.

Task 4

Draw a spooky house with a bare tree whose trunk is 10 cm and three fork levels. List the minimum terminal branch length and one check.

Answer: Minimum terminal branch length is one eighth of the trunk, 10 / 8 = 1.25 cm. This follows from three half-length fork levels (1/2 cubed = 1/8) but is checked explicitly. Check by measuring the shortest terminal branch and extending it if below 1.25 cm.

Reason: The fork rule and terminal length rule keep the tree proportionate and bare.

Check: Measure trunk length, divide by eight, and compare with the shortest terminal branch.

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Source rubric / reflection

- [ ] Baseline, midline, and x-height are marked and measurable.
- [ ] Both walls show a recorded tilt from vertical and wall tops are level within 1 cm.
- [ ] Windows are dark, inside the wall boundary, and side margins match within 0.5 cm.
- [ ] Roof peak sits above the midpoint of the wall tops within 0.5 cm.
- [ ] Bare tree has three fork levels and follows the half-length fork rule.
- [ ] Valid alternatives are accepted when choices are consistent and measurable.

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