Draw a Temple Facade: Roofline, Columns, and Steps

Original tasks 1, 2 / complete keys

Task 1

Draw a facade 6U wide with no edge margins, three columns of width 1U, and two inter-column gaps of width 1.5U. Check the width arithmetic before drawing.

Answer: Three columns use 3U. Two inter-column gaps use 3U. Total width is 6U, with the outer columns flush to the facade edges. Draw three vertical columns with two equal gaps of 1.5U.

Reason: 3 times 1U equals 3U; 2 times 1.5U equals 3U; 3U plus 3U equals 6U. With no edge margins, the arithmetic confirms the layout fits the facade width.

Check: Measure each column width as 1U and each inter-column gap as 1.5U. Confirm the outer columns are flush to the facade edges, add the widths, and confirm the sum is 6U.

Task 2

Draw a facade 8U wide with no edge margins, four columns of width 1U, and three inter-column gaps. Find the gap width so the total is 8U.

Answer: Four columns use 4U. The remaining width is 4U for three inter-column gaps, so each gap is 4U divided by 3, about 1.33U. Draw four columns flush to the facade edges and three equal gaps of about 1.33U.

Reason: 8U minus 4U equals 4U. Dividing 4U by 3 gives the gap width. With no edge margins, the arithmetic is checkable even though the value is not a whole unit.

Check: Measure the three inter-column gaps and confirm they are equal and that the outer columns are flush to the facade edges. Multiply one gap by 3 and add 4U for the columns; the total should be 8U within your tolerance.

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Original tasks 3, 4 / complete keys

Task 3

Draw a facade 6U high with three steps, each 1U high and 6U wide, below columns whose bases sit at the step top. The column tops sit 1U above the step top, and the roof base sits 1U above the column tops. Find the height available for the roof profile above the roof base.

Answer: Three steps use 3U of height. The column band uses 1U and the roof base band uses 1U, so 3U + 1U + 1U = 5U. The remaining height for the roof profile is 6U minus 5U, which is 1U. Draw the roof peak 1U above the roof base, inside the frame.

Reason: Start with the 6U total height. Subtract 3U for the three steps, leaving 3U. Subtract 1U for the column band and 1U for the roof base band, leaving 1U for the roof profile. The vertical sum checks: 3U steps + 1U columns + 1U roof base + 1U roof profile = 6U.

Check: Measure total step height as 3U, step top to column top as 1U, column top to roof base as 1U, and roof base to roof peak as 1U. Add the four measurements and confirm the sum is 6U within your tolerance.

Task 4

Draw a facade 7U wide with no edge margins, four columns, and three inter-column gaps of 1U each. Add a roof whose corners are 2U from the centerline on each side. Check symmetry and width.

Answer: Four columns use 4U and three inter-column gaps use 3U, totaling 7U, with the outer columns flush to the facade edges. The roof corners are 2U left and 2U right of the centerline, so the roof spans 4U and is symmetric.

Reason: The column and inter-column gap arithmetic matches the facade width with no edge margins. The roof corner distances are equal, so the roof is symmetric about the centerline.

Check: Measure the roof corner distances from the centerline and confirm both are 2U. Measure column and inter-column gap widths, confirm the outer columns are flush to the facade edges, and confirm the total is 7U.

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Source rubric / reflection

- [ ] Facade frame is a rectangle with baseline and midline marked.
- [ ] One unit U is defined and used consistently for horizontal measurements.
- [ ] Roofline is symmetric about the centerline within the chosen tolerance.
- [ ] Column count and gap count arithmetic matches the facade width.
- [ ] Column widths and gaps are equal within the chosen tolerance.
- [ ] Steps use the same unit U and meet the column bases.
- [ ] Valid alternative column styles are accepted if spacing checks pass.
- [ ] All numerical values are labeled as hypothetical examples.

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