Isometric Athens Polikatoikia Facade: Balconies on Three Axes

Original tasks 1, 2, 3 / complete keys

Task 1

Draw a 2-floor facade 4 units wide and 6 units tall with one balcony per floor projecting 1 unit. Use a unit of 15 mm as a hypothetical example. Describe the slab shape and railing placement.

Answer: Facade parallelogram: 4 units along left receding axis, 6 units vertical. Floor bands at 3 and 6 units. Each balcony slab is 2 units wide along left receding axis and 1 unit deep along right receding axis, placed at a band. Railing lines rise vertically above the slab edge and run along the right receding axis.

Reason: The facade uses vertical and left receding axes; balconies project on the right receding axis. Equal vertical intervals give two floors of 3 units each.

Check: Verify all edges are parallel to the three axes; count two floor bands and two slabs; confirm slab depth is 1 unit and width is 2 units.

Task 2

A facade is 5 units wide and 10 units tall with floor bands every 2.5 units. How many floors are shown? Draw one window per floor centered between bands, and state the window rectangle axes.

Answer: Four floors. Window rectangles use vertical and left receding axes, placed between adjacent bands. Each window is centered horizontally on the facade plane.

Reason: 10 divided by 2.5 equals 4 floors. Windows on the facade plane use vertical and left receding edges.

Check: Count bands: 2.5, 5, 7.5, 10 gives four intervals; check each window sits between two bands and edges are parallel to vertical and left receding axes.

Task 3

Draw a 3-floor facade with balconies of alternating depth: 1 unit and 2 units, using a unit of 8 mm as a hypothetical example. Explain how to keep the slabs consistent.

Answer: Mark three floor bands. On floor 1, draw a slab 1 unit deep along the right receding axis; on floor 2, 2 units deep; on floor 3, 1 unit deep. Keep width constant along the left receding axis. Railings follow each slab edge using vertical and right receding lines.

Reason: Alternating depth is allowed if each slab uses the right receding axis and the same unit length. Consistency comes from measuring depth along that axis only.

Check: Measure each slab depth along the right receding axis; confirm values alternate 1, 2, 1 unit; check railings align with slab edges.

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Original tasks 4 / complete keys

Task 4

Create a facade 6 units wide and 8 units tall with two balconies on the top floor and one on each lower floor. Use floor bands every 2 units. Describe the layout and a simple arithmetic check.

Answer: Four floors with bands at 2, 4, 6, 8 units. Lower three floors each have one balcony slab; top floor has two slabs side by side. Each slab projects 1.5 units along the right receding axis. Arithmetic check: 8 divided by 2 equals 4 floors; total balcony count is 1+1+1+2=5.

Reason: Equal vertical intervals define floors; balcony count and placement are planned before drawing. Slab depth is measured on the right receding axis.

Check: Count four bands and five slabs; verify each slab depth is 1.5 units; confirm all edges are parallel to the three axes.

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Source rubric / reflection

- [ ] All edges are parallel to one of the three isometric axes.
- [ ] Facade outline is a correct parallelogram with consistent unit lengths.
- [ ] Floor bands are parallel and equally spaced vertically.
- [ ] Balcony slabs use the right receding axis for depth and left receding axis for width.
- [ ] Railings are placed above slabs with vertical and right receding edges.
- [ ] Window openings are rectangles on the facade plane and align between bands.
- [ ] Line convention is consistent: light construction lines, darker final edges.
- [ ] Lettering is legible with x-height from baseline to midline; style may vary.
- [ ] Numerical values are labeled as hypothetical examples where used.
- [ ] Valid alternatives in line weight, lettering style, and minor decoration are accepted if axes and structure remain correct.

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