Draw a Brick Wall: Courses, Mortar Joints, and Edge Shading

Original tasks 1, 2, 3, 4 / complete keys

Task 1

A panel is 90 mm tall. You want 6 courses. What is the course height?

Answer: 15 mm per course.

Reason: Divide the panel height by the number of courses: 90 divided by 6 equals 15.

Check: Multiply 15 mm by 6 courses and confirm the result is 90 mm.

Task 2

A brick is 20 mm long and the joint is 4 mm wide. How many full bricks plus joints fit across a 96 mm panel, and what remains?

Answer: Four bricks plus four joints (three interior joints plus one trailing joint) total 96 mm, so the panel ends exactly at a trailing joint with no partial brick.

Reason: One brick plus one joint is 24 mm. Four of these use 96 mm, which equals the panel width.

Check: Add 24 mm four times and compare with 96 mm.

Task 3

In a stretcher pattern, course 1 starts with a full brick. Course 2 is offset by half a brick plus half a joint. If the brick is 30 mm and the joint is 6 mm, what is the offset?

Answer: 18 mm.

Reason: Half a brick is 15 mm and half a joint is 3 mm; 15 plus 3 equals 18 mm.

Check: Add 18 mm to the start of course 1; this equals half a brick (15 mm) plus half a joint (3 mm). Check that each course 2 joint is 18 mm from the nearest course 1 joint.

Task 4

You shade the right and bottom edges of each brick with light from the upper left. A classmate shades the left and top edges instead. Is that acceptable under the rubric?

Answer: It is acceptable only if the classmate uses one consistent direction throughout and the shading stays inside brick rectangles.

Reason: The rubric rewards consistent direction and clean joints, not one universal light direction.

Check: Scan every brick and confirm the shaded edges are the same pair on all bricks and do not cross joints.

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Source rubric / reflection

- [ ] Course lines are parallel and evenly spaced within the chosen course height.
- [ ] Mortar joint width is consistent across each course.
- [ ] Alternate courses show a half-brick offset, and joints are offset from the course below by half a brick plus half a joint.
- [ ] Edge shading follows one light direction and stays inside brick rectangles.
- [ ] The wall panel edge band is distinct from brick shading.
- [ ] Valid alternatives are accepted if spacing and joint logic remain consistent.

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