How to Draw an Isometric Brick Wall with Coursing and Mortar Joints

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

Task 1

A wall has four courses. Course one starts with a full brick of 20 mm. What is the starting length of course two if the running bond offset is half a brick?

Answer: 10 mm.

Reason: Half of 20 mm is 10 mm, so course two begins with a half brick.

Check: Measure the first brick in course two with a ruler; it should be 10 mm before the first joint.

Task 2

You choose a joint width of 2 mm and a brick length of 20 mm. How long is the visible brick face along the length axis after subtracting joints at both ends?

Answer: 16 mm.

Reason: Subtract 2 mm at each end: 20 minus 2 minus 2 equals 16 mm.

Check: Measure a drawn brick face between two joint bands; it should read 16 mm.

Task 3

A three-course wall uses course height 8 mm. What is the total height from the baseline to the top of course three, ignoring joint thickness between courses?

Answer: 24 mm.

Reason: Three courses at 8 mm each: 3 times 8 equals 24 mm.

Check: Measure from baseline to the top course line; it should be 24 mm.

Task 4

In a running bond, course one has joints at 20 mm and 40 mm from the left edge. Where should the first vertical joint of course two fall if it starts with a half brick?

Answer: At 10 mm from the left edge.

Reason: A half-brick start places the first joint after 10 mm, which is the midpoint of the first 20 mm brick below.

Check: Check that the course two joint aligns with the centre mark of the first brick in course one.

How to Draw an Isometric Brick Wall with Coursing and Mortar Joints

Source rubric / reflection

- [ ] Three isometric axes are present and wall lines follow them.
- [ ] Course lines are evenly spaced at the chosen course height.
- [ ] Courses alternate full and half-brick starts.
- [ ] Vertical joints align at midpoints of the course below.
- [ ] Mortar joint width is consistent and labelled.
- [ ] Joint depth shading is simple and does not obscure brick faces.
- [ ] Final lines are clear and construction lines are light.
- [ ] Any consistent labelling or lettering style is accepted if legible.

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