Hiragana Square-Grid Practice Layout: Plan a Printable Copying Sheet

Original tasks 1, 2, 3 / complete keys

Task 1

A hypothetical cell side is 15 mm and the gap is 3 mm. The measured printable width is 200 mm. Check whether eight cells fit in one row, in millimetres.

Answer: Eight cells use 8 × 15 = 120 mm. Seven gaps use 7 × 3 = 21 mm. Total is 141 mm, which is less than 200 mm, so eight cells fit with 59 mm remaining.

Reason: Multiply cell side by cell count, multiply gap by one fewer than the cell count, add the two products, and compare with printable width.

Check: Recompute 8 × 15 = 120 and 7 × 3 = 21, then 120 + 21 = 141. Confirm 141 is below 200.

Task 2

A planned sheet has a 10 mm cell and a 1 mm gap. The printable width is 120 mm. Find the largest whole number of cells that fits in one row, using millimetres.

Answer: Eleven cells use 11 × 10 = 110 mm plus 10 gaps × 1 = 10 mm, totalling 120 mm, so eleven cells fit exactly. Twelve cells would use 120 + 11 = 131 mm, which exceeds 120 mm.

Reason: Test a candidate count by adding cell width and gap width, using one fewer gap than cells, and compare with the printable width.

Check: Check eleven: 110 + 10 = 120. Check twelve: 120 + 11 = 131. Confirm 131 is greater than 120.

Task 3

A hypothetical 12 mm cell has its midline at half the cell height. State the x-height under the baseline-to-midline convention, and explain how the answer changes if the cell side is 16 mm.

Answer: For a 12 mm cell, the midline is at 6 mm above the baseline, so the x-height is 6 mm. For a 16 mm cell, the midline is at 8 mm, so the x-height is 8 mm.

Reason: The convention defines x-height as baseline to midline. The midline is halfway up the square cell, so divide the cell side by two.

Check: Verify that 6 + 6 = 12 and 8 + 8 = 16, confirming the midline is halfway in each case.

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Original tasks 4 / complete keys

Task 4

A model row has five cells. A learner copies the same five characters into a blank row below. The rubric allows valid alternatives. Describe two placement checks a checker can make without requiring one exact shape.

Answer: First, check that each copy stays within its square cell and touches neither the left nor right side excessively. Second, check that the main body of each copy sits between the baseline and the midline under the stated convention. Both checks compare placement, not exact curves, so valid letter-style alternatives can pass.

Reason: Because letter styles vary, the rubric focuses on cell containment and the baseline-to-midline convention rather than a single universal shape.

Check: Compare the model row and copy row cell by cell, recording whether each copy is inside its cell and whether its main body falls between baseline and midline.

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Source rubric / reflection

- [ ] Cell is square with equal side lengths recorded in one unit.
- [ ] Baseline and midline are visible and the convention states x-height is baseline to midline.
- [ ] Model row and blank copying rows align cell by cell.
- [ ] Row-width arithmetic uses gaps equal to one fewer than the cell count.
- [ ] Answer sheet labels the convention and notes that letter styles vary, allowing valid alternatives.
- [ ] Any numerical value chosen for the layout is labelled as a hypothetical example.

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