Hand Lettering on Graph Paper for Clean Digitizing

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

Task 1

On 4 mm graph paper, plan an x-height of 4 squares. The baseline is 12 mm from the bottom edge. Where is the midline in millimetres above the baseline?

Answer: Midline is 16 mm above the baseline.

Reason: X-height = 4 squares × 4 mm = 16 mm. The midline is one x-height above the baseline, so 16 mm.

Check: Multiply square count by square size: 4 × 4 = 16. Confirm the midline label matches 16 mm.

Task 2

A lowercase n is drawn 3 squares wide on 5 mm paper. A second n is drawn 2.5 squares wide. What is the width difference in millimetres?

Answer: The difference is 2.5 mm.

Reason: First width = 3 × 5 = 15 mm. Second width = 2.5 × 5 = 12.5 mm. Difference = 15 − 12.5 = 2.5 mm.

Check: Subtract square counts first: 3 − 2.5 = 0.5 square; 0.5 × 5 = 2.5 mm.

Task 3

Four registration marks are placed 2 squares from each corner on 5 mm paper. What is the offset in millimetres from each corner?

Answer: Each mark is 10 mm from its nearest corner.

Reason: Offset = 2 squares × 5 mm = 10 mm. The same offset applies to each corner if the layout is symmetric.

Check: Count 2 squares on the paper and measure 10 mm with a ruler; both should agree.

Task 4

A traced letter measures 18 mm from baseline to midline. The original plan used 3 squares on 6 mm paper. Does the trace match the planned x-height?

Answer: Yes, it matches: planned x-height is 18 mm.

Reason: Planned x-height = 3 × 6 = 18 mm. The traced measurement is also 18 mm, so the x-height matches.

Check: Multiply 3 by 6 to get 18, then compare with the traced measurement of 18 mm.

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Source rubric / reflection

- [ ] Registration marks: four marks present, equal size, at least 2 squares from lettering.
- [ ] X-height convention: lowercase x-height letters sit between baseline and midline; ascenders and descenders are in their zones.
- [ ] Grid use: widths and heights are recorded in whole or half squares and repeated letters match.
- [ ] Scan readiness: all marks visible, grid lines straight, page aligned.
- [ ] Trace quality: letter edges traced, closed shapes closed, registration marks preserved or noted.
- [ ] Measurement check: traced x-height matches the planned square count at the recorded scale.

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