Lettering Layout Grid: Plan Words with Baseline, X-Height, Cap-Height and Spacing Zones

Rubric Checklist

Checklist matching the rubric; qualitative key.

Checklist:

1. Baseline, midline, cap line and descender line are drawn and labeled.

2. X-height zone is explicitly defined as baseline to midline.

3. Cap-height zone is explicitly defined as baseline to cap line.

4. Every letter has a marked start tick and end tick on the baseline.

5. Letter widths and gaps are labeled in columns or half-columns.6. Total width arithmetic is shown and checked against available columns.7. Descender zone is included in the height plan.8. Valid style alternatives are accepted when zone labels and tick marks remain consistent.

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Complete worked example / separate answer key

Plan the word 'mint' on a grid with 6 letter-width columns and 5 half-column gaps. Each letter uses one column. The page has 8 columns available inside the margins. Does the plan fit, and how many columns remain?

Answer: The four letters use 4 columns. The gaps between four letters are three gaps, each half a column, so $3 \times 0.5 = 1.5$ columns. Total used is $4 + 1.5 = 5.5$ columns. The page has 8 columns, so $8 - 5.5 = 2.5$ columns remain. The plan fits with 2.5 columns to spare.

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Original tasks 1, 2, 3 / complete keys

Task 1

Plan the word 'cat' using one column per letter and half-column gaps. The page has 5 columns available. How many columns are used, and how many remain?

Answer: Used: 3 letters × 1 column = 3 columns. Gaps: 2 gaps × 0.5 column = 1 column. Total used = 4 columns. Remaining = 5 − 4 = 1 column.

Reason: Three letters need three width columns. Two gaps sit between the three letters, each half a column. Add widths and gaps, then subtract from the available columns.

Check: Recount the letters and gaps: c-a-t has two gaps. Confirm 3 + 1 = 4 and 5 − 4 = 1.

Task 2

A grid has an x-height of 8 mm and a cap-height of 12 mm, measured from the baseline. A lowercase letter body is planned from baseline to midline. How many millimetres above the midline does the cap line sit?

Answer: The cap line sits 4 mm above the midline.

Reason: Cap-height is 12 mm from baseline. X-height is 8 mm from baseline to midline. The difference is 12 − 8 = 4 mm.

Check: Add the difference back: 8 mm to midline plus 4 mm equals 12 mm cap-height.

Task 3

Plan the phrase 'go up' with one column per letter and half-column gaps between letters. Use a full one-column gap between the two words. How many columns are used in total?

Answer: Letters: g, o, u, p = 4 columns. Letter gaps: g-o, o-u, u-p = 3 gaps × 0.5 = 1.5 columns. Word gap: 1 column. Total = 4 + 1.5 + 1 = 6.5 columns.

Reason: Count four letters, three letter gaps and one word gap. Add the width columns and both gap types.

Check: List the sequence: g, gap, o, word gap, u, gap, p. Confirm three half-gaps and one full gap, then add 4 + 1.5 + 1.

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Original tasks 4 / complete keys

Task 4

A word uses 5 letter columns and 4 half-column gaps. The page has 7 columns available. Does it fit, and by how many columns?

Answer: Used = 5 + (4 × 0.5) = 5 + 2 = 7 columns. The page has 7 columns, so it fits exactly with 0 columns remaining.

Reason: Four gaps between five letters each use half a column, giving 2 columns of gap space. Add the 5 letter columns to get 7 total.

Check: Subtract used from available: 7 − 7 = 0. Confirm the gap count is one fewer than the letter count.

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Worked example, Task 1, Task 2, Task 3, Task 4 / Worked Example and Exercise Answers

Separate answer sheet. Worked arithmetic for the worked example and four exercises.

Worked example: 'mint' with 6 letter-width columns and 5 half-column gaps. Four letters use 4 columns. Three gaps × 0.5 = 1.5 columns. Total used = 5.5 columns. Page has 8 columns, so 8 − 5.5 = 2.5 columns remain. The plan fits with 2.5 columns to spare.

Exercise 1 ('cat'): 3 letters × 1 column = 3 columns. 2 gaps × 0.5 = 1 column. Total used = 4 columns. Remaining = 5 − 4 = 1 column.

Exercise 2 (x-height 8 mm, cap-height 12 mm): cap line sits 12 − 8 = 4 mm above the midline. Check: 8 + 4 = 12 mm.

Exercise 3 ('go up'): letters g, o, u, p = 4 columns. Letter gaps g-o, o-u, u-p = 3 × 0.5 = 1.5 columns. Word gap = 1 column. Total = 4 + 1.5 + 1 = 6.5 columns.

Exercise 4 (5 letter columns, 4 half-column gaps, 7 columns available): used = 5 + (4 × 0.5) = 5 + 2 = 7 columns. Fits exactly with 0 columns remaining.

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Source rubric / reflection

- [ ] Baseline, midline, cap line and descender line are drawn and labeled.
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- [ ] Every letter has a marked start tick and end tick on the baseline.
- [ ] Letter widths and gaps are labeled in columns or half-columns.
- [ ] Total width arithmetic is shown and checked against available columns.
- [ ] Descender zone is included in the height plan.
- [ ] Valid style alternatives are accepted when zone labels and tick marks remain consistent.

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