3-2-3 Calligraphy Guideline Practice Sheet: Ratio, Slant, and Letterform Drills

Rubric

Five rubric criteria for zone control, slant consistency, ratio fidelity, convention use, and self-check.

Rubric:

1. Zone control: each letter's skeleton stays within its intended ascender, x-height, or descender zone.
2. Slant consistency: main vertical strokes follow the slant lines within the stated tolerance.
3. Ratio fidelity: the x-height measures 2 units and the ascender and descender zones measure 3 units each.
4. Convention use: valid style alternatives are recorded rather than marked wrong.
5. Self-check: row scores are counted and dated for comparison.

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Complete worked example / separate answer key

A learner sets an x-height of 8 mm on a 3-2-3 sheet. Calculate the ascender zone, the descender zone, and the total height from ascender top to descender bottom. Then state how many millimetres above the baseline the midline sits.

Answer: One unit is 8 divided by 2, which is 4 mm. The ascender zone is 3 times 4, which is 12 mm. The descender zone is also 12 mm. The total height is 12 plus 8 plus 12, which is 32 mm. The midline sits 8 mm above the baseline.

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Original tasks 1, 2, 3 / complete keys

Task 1

An x-height of 10 mm is used on a 3-2-3 sheet. Find one unit, the ascender zone, the descender zone, and the total height from ascender top to descender bottom.

Answer: One unit is 5 mm; ascender zone 15 mm; descender zone 15 mm; total height 40 mm.

Reason: Divide the x-height by 2 to get one unit: 10 divided by 2 equals 5 mm. Multiply by 3 for each outer zone: 5 times 3 equals 15 mm. Add the three zones: 15 plus 10 plus 15 equals 40 mm.

Check: Re-add the zones and confirm that the x-height is exactly 2 units: 5 plus 5 equals 10 mm.

Task 2

A practice row has 14 letter positions. The learner circles 4 letters for zone errors and 2 for slant errors, with no letter counted twice. What is the row score out of 14?

Answer: 8 out of 14.

Reason: The circled letters total 4 plus 2 equals 6. Subtract from 14: 14 minus 6 equals 8.

Check: Confirm that no letter was counted twice, then subtract the total circles from the number of positions.

Task 3

A slant line is drawn 20 degrees from vertical. A learner's vertical stroke leans 25 degrees from vertical. Using a tolerance of plus or minus 5 degrees, is the stroke within tolerance? State the difference.

Answer: Yes, it is within tolerance; the difference is 5 degrees.

Reason: Subtract the guide angle from the stroke angle: 25 minus 20 equals 5 degrees. A difference of 5 degrees equals the allowed tolerance, so the stroke is at the limit but acceptable.

Check: Compare the absolute difference with the stated tolerance; if it is less than or equal to the tolerance, accept it.

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Original tasks 4 / complete keys

Task 4

A sheet uses a 6 mm x-height. A lowercase o touches the midline at its top and the baseline at its bottom, but its skeleton centre sits 1 mm above the midline. Using the skeleton convention, is the letter in the x-height zone? Explain.

Answer: No, the skeleton centre is outside the x-height zone because it sits above the midline.

Reason: The x-height zone runs from baseline to midline. A skeleton centre 1 mm above the midline is in the ascender zone, even though the outer curve touches the midline.

Check: Measure the skeleton centre against the baseline and midline; if it is above the midline, record a zone error.

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Task 1, Task 2 / Exercise answers with reasoning and checks

Four exercise answers with reasoning and check methods, kept on a separate answer page.

Exercise 1: An x-height of 10 mm is used on a 3-2-3 sheet. Find one unit, the ascender zone, the descender zone, and the total height from ascender top to descender bottom.

Answer: One unit is 5 mm; ascender zone 15 mm; descender zone 15 mm; total height 40 mm.

Reasoning: Divide the x-height by 2 to get one unit: 10 divided by 2 equals 5 mm. Multiply by 3 for each outer zone: 5 times 3 equals 15 mm. Add the three zones: 15 plus 10 plus 15 equals 40 mm.

Check: Re-add the zones and confirm that the x-height is exactly 2 units: 5 plus 5 equals 10 mm.

Exercise 2: A practice row has 14 letter positions. The learner circles 4 letters for zone errors and 2 for slant errors, with no letter counted twice. What is the row score out of 14?

Answer: 8 out of 14. Reasoning: The circled letters total 4 plus 2 equals 6. Subtract from 14: 14 minus 6 equals 8. Check: Confirm that no letter was counted twice, then subtract the total circles from the number of positions.

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Task 3, Task 4 / Exercise answers 3 and 4

Exercise 3 slant tolerance and exercise 4 skeleton-centre zone check.

Exercise 3: A slant line is drawn 20 degrees from vertical. A learner's vertical stroke leans 25 degrees from vertical. Using a tolerance of plus or minus 5 degrees, is the stroke within tolerance? State the difference.

Answer: Yes, it is within tolerance; the difference is 5 degrees.

Reasoning: Subtract the guide angle from the stroke angle: 25 minus 20 equals 5 degrees. A difference of 5 degrees equals the allowed tolerance, so the stroke is at the limit but acceptable.

Check: Compare the absolute difference with the stated tolerance; if it is less than or equal to the tolerance, accept it.

Exercise 4: A sheet uses a 6 mm x-height. A lowercase o touches the midline at its top and the baseline at its bottom, but its skeleton centre sits 1 mm above the midline. Using the skeleton convention, is the letter in the x-height zone? Explain.

Answer: No, the skeleton centre is outside the x-height zone because it sits above the midline. Reasoning: The x-height zone runs from baseline to midline. A skeleton centre 1 mm above the midline is in the ascender zone, even though the outer curve touches the midline. Check: Measure the skeleton centre against the baseline and midline; if it is above the midline, record a zone error.

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Worked example / Worked example answer

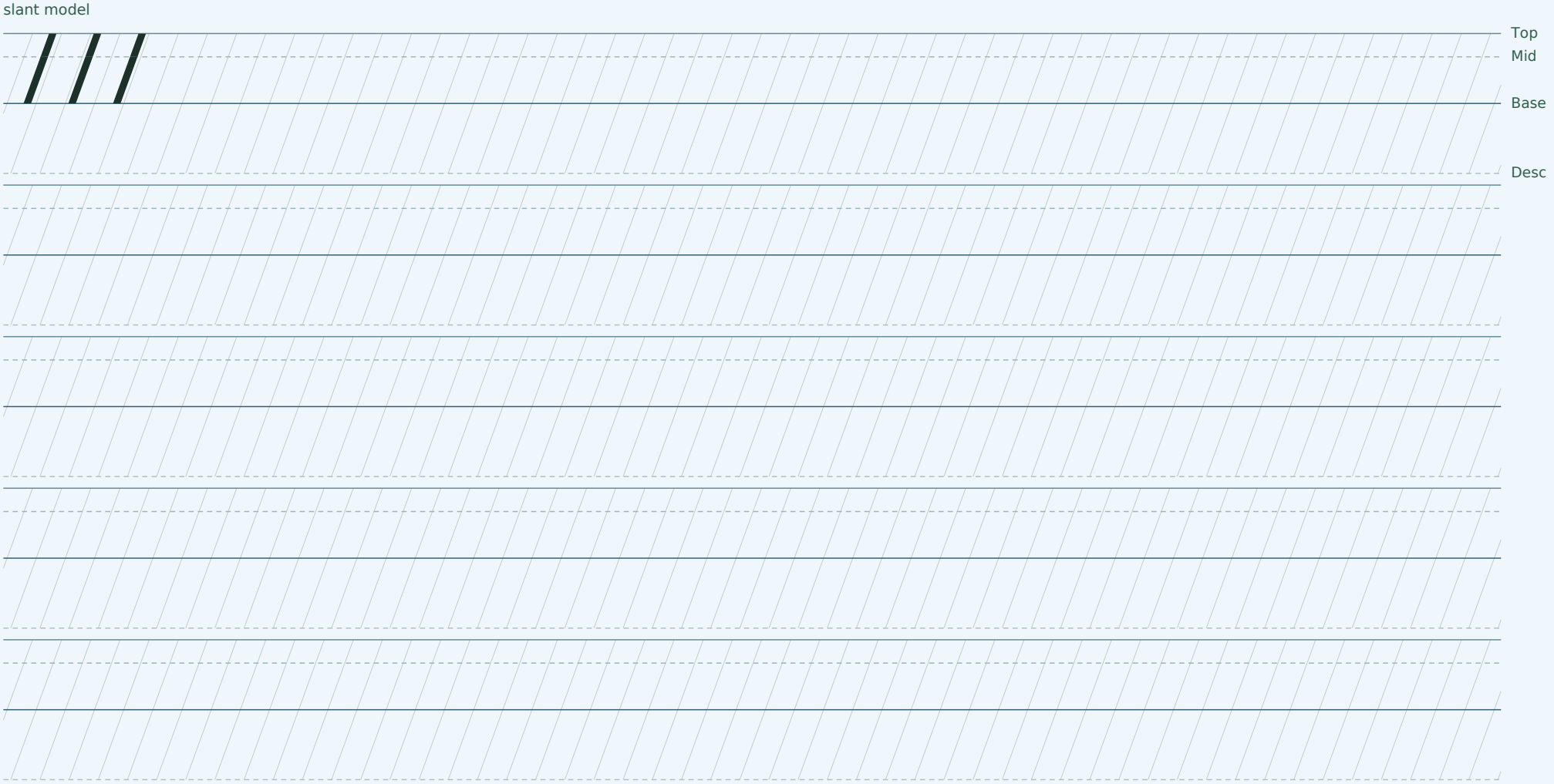
Worked example: x-height 8 mm on a 3-2-3 sheet. Unit 4 mm; ascender 12 mm; descender 12 mm; total 32 mm; midline 8 mm above baseline.

Worked example: A learner sets an x-height of 8 mm on a 3-2-3 sheet. Calculate the ascender zone, the descender zone, and the total height from ascender top to descender bottom. Then state how many millimetres above the baseline the midline sits.

Answer: One unit is 8 divided by 2, which is 4 mm. The ascender zone is 3 times 4, which is 12 mm. The descender zone is also 12 mm. The total height is 12 plus 8 plus 12, which is 32 mm. The midline sits 8 mm above the baseline.

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Task 3 / Slant guide comparison diagram



Slant lines at 20 deg from vertical. Compare a vertical stroke against the nearest guide; tolerance plus or minus 5 deg.

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Source rubric / reflection

- [ ] Zone control: each letter's skeleton stays within its intended ascender, x-height, or descender zone.
- [ ] Slant consistency: main vertical strokes follow the slant lines within the stated tolerance.
- [ ] Ratio fidelity: the x-height measures 2 units and the ascender and descender zones measure 3 units each.
- [ ] Convention use: valid style alternatives are recorded rather than marked wrong.
- [ ] Self-check: row scores are counted and dated for comparison.

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