College-Ruled Paper: Layout, Margins, and Header Design

Complete worked example / separate answer key

Plan an A4 portrait college-ruled sheet with 7.1 mm spacing, a hypothetical 25 mm header, a 15 mm bottom margin, a 20 mm left margin, and a 15 mm right margin. Find the number of full ruled lines and the writing field width.

Answer: Writing field height is 297 minus 25 minus 15, which equals 257 mm. Dividing 257 by 7.1 gives about 36.2, so 36 full lines fit. The used height is 36 times 7.1, which equals 255.6 mm, leaving 1.4 mm. Writing field width is 210 minus 20 minus 15, which equals 175 mm.

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Original tasks 1, 2, 3 / complete keys

Task 1

An A4 portrait sheet has a 30 mm header, a 20 mm bottom margin, and 7.1 mm ruling. How many full ruled lines fit?

Answer: 34 full lines.

Reason: The writing field height is 297 minus 30 minus 20, which equals 247 mm. Dividing 247 by 7.1 gives about 34.8, so 34 full lines fit. 34 times 7.1 equals 241.4 mm, leaving 5.6 mm.

Check: Multiply 34 by 7.1 to get 241.4 mm, add the 30 mm header and 20 mm bottom margin to get 291.4 mm, which is less than 297 mm. A 35th line would add 7.1 mm and exceed the page.

Task 2

A sheet is 210 mm wide with a 25 mm left margin and a 20 mm right margin. What is the writing field width, and how much width remains if a 10 mm annotation column is added inside the left margin?

Answer: The writing field width is 165 mm. Adding a 10 mm annotation column inside the left margin leaves 155 mm for writing.

Reason: Subtract the left and right margins from the page width: 210 minus 25 minus 20 equals 165 mm. If a 10 mm annotation column is placed inside the left margin, subtract another 10 mm: 165 minus 10 equals 155 mm.

Check: Add the parts back: 25 mm left margin plus 10 mm annotation column plus 155 mm writing field plus 20 mm right margin equals 210 mm.

Task 3

A blue-rule variant is planned with 7.1 mm spacing, a 25 mm header, and a 15 mm bottom margin. A draft claims 38 full lines. Is the claim correct?

Answer: No. Only 36 full lines fit.

Reason: The writing field height is 297 minus 25 minus 15, which equals 257 mm. Dividing 257 by 7.1 gives about 36.2, so 36 full lines fit. A claim of 38 lines would require 38 times 7.1, which equals 269.8 mm, and adding the 25 mm header and 15 mm bottom margin gives 309.8 mm, which exceeds 297 mm.

Check: Compute 38 times 7.1 equals 269.8 mm; add 25 and 15 to get 309.8 mm, which is greater than 297 mm, so the claim fails.

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Original tasks 4 / complete keys

Task 4

A plan places three binder guides at hypothetical positions 12 mm, 90 mm, and 168 mm from the top edge on the left side. The left margin line is 20 mm from the left edge. Explain how to check that the guides do not cross the margin line or header, and state what must be measured before publication.

Answer: Check that each guide lies within the 20 mm left margin column and below the header band. Measure the actual binder or punch to confirm the guide positions before publication.

Reason: The guides are on the left edge, so their horizontal position must be less than 20 mm from the left edge to stay inside the margin column. Their vertical positions must be below the header depth, for example below a hypothetical 25 mm header. The values 12 mm, 90 mm, and 168 mm are hypothetical and must be replaced by measurements from the actual equipment.

Check: For each guide, confirm the horizontal distance from the left edge is less than the margin distance and the vertical distance from the top is greater than the header depth. Then compare the planned positions with the measured positions on the real binder or punch.

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Task 4 / Answer notes: hypothetical labels and measurement requirement

No resource is currently downloadable, built, tested, or available as a file.

All numerical values in the worksheet and diagrams are hypothetical examples, not manufacturing standards or printer tolerances.

Binder guide positions must be measured from the actual binder or punch; no hardware standard is assumed.

The blue-rule variant changes only the horizontal rule colour; spacing, margin, and header remain identical.

Handwriting is judged by baseline-to-midline x-height and legibility, with alternative letter styles accepted.

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Worked example, Task 1, Task 2, Task 3, Task 4 / Separate answer sheet: worked arithmetic (hypothetical example values)

All chosen numbers are hypothetical examples. Measure actual equipment before publication.

Item	Value	Check
Worked example: writing field height	297 - 25 - 15 = 257 mm	Subtract header and bottom margin first
Worked example: full lines	257 / 7.1 ≈ 36.2 → 36 lines	Keep whole number only
Worked example: used height	36 × 7.1 = 255.6 mm	Leaves 1.4 mm
Worked example: writing field width	210 - 20 - 15 = 175 mm	Subtract left and right margins
Exercise 1: full lines	34 lines	247 / 7.1 ≈ 34.8; 34 × 7.1 = 241.4 mm; 241.4 + 30 + 20 = 291.4 < 297
Exercise 2: writing field width	165 mm	210 - 25 - 20 = 165
Exercise 2: with 10 mm annotation column	155 mm	165 - 10 = 155; 25 + 10 + 155 + 20 = 210
Exercise 3: claim of 38 lines	Incorrect; only 36 fit	38 × 7.1 = 269.8; 269.8 + 25 + 15 = 309.8 > 297
Exercise 4: binder guide check	Guides must lie within 20 mm left margin column and below header band	Measure actual binder or punch before publication

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Source rubric / reflection

- [ ] The sheet states A4 portrait dimensions as 210 mm by 297 mm.
- [ ] The ruling is stated as 7.1 mm and is used consistently across the writing field.
- [ ] The header block is separate from the ruled lines and does not overlap them.
- [ ] The left margin line is placed at a stated distance and runs the full writing field.
- [ ] The line count is checked by arithmetic that subtracts the header and bottom margin first.
- [ ] The blue-rule variant changes only the horizontal rule colour.
- [ ] Binder guide positions are described as measured from actual equipment, with example values labelled hypothetical.
- [ ] Handwriting is judged by baseline-to-midline x-height and legibility, with alternative letter styles accepted.

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