Ruled Paper Measurement Reference Chart: Sizes, Spacing, and Margins

Complete worked example / separate answer key

A sheet is measured in portrait orientation. Width is 210 mm and height is 297 mm. Three baseline-to-baseline gaps are 7.8 mm, 8.0 mm, and 8.1 mm. The left margin from the paper edge to the nearest vertical rule is 20 mm. Record the sheet size, the median line spacing with its method label, and the left margin. Then convert the median spacing to centimetres and inches to one decimal place.

Answer: Sheet size: 210 mm by 297 mm, portrait. Line spacing: median of 7.8, 8.0, and 8.1 is 8.0 mm, baseline-to-baseline. Left margin: 20 mm. Conversion: 8.0 mm equals 0.8 cm and 0.3 inches to one decimal place. Check: 0.8 cm times 10 equals 8.0 mm, which returns to the original value. For inches, 8.0 mm divided by 25.4 equals 0.3149..., which rounds to 0.3 inches; reversing, 0.3 inches times 25.4 equals 7.62 mm, which does not round to 8.0 mm, so the one-decimal inch value is a rounded restatement and the original 8.0 mm value must remain visible.

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Original tasks 1, 2 / complete keys

Task 1

A portrait sheet measures 148 mm wide and 210 mm high. Three baseline-to-baseline gaps are 6.0 mm, 6.2 mm, and 6.1 mm. The top margin from the paper edge to the first horizontal rule is 15 mm. Record the sheet size, the median line spacing with its method label, and the top margin.

Answer: Sheet size: 148 mm by 210 mm, portrait. Line spacing: median of 6.0, 6.2, and 6.1 is 6.1 mm, baseline-to-baseline. Top margin: 15 mm.

Reason: The median is the middle value when the three gaps are ordered: 6.0, 6.1, 6.2. The middle value is 6.1 mm. The method label is required because the gaps were measured baseline-to-baseline.

Check: Order the three gaps again and confirm the middle value is 6.1 mm. Confirm the sheet dimensions are written width by height with the portrait label.

Task 2

A landscape sheet measures 297 mm wide and 210 mm high. The left margin is marked by a vertical rule 25 mm from the paper edge. The right margin has no printed boundary. Record the sheet size, the left margin, and the right margin entry.

Answer: Sheet size: 297 mm by 210 mm, landscape. Left margin: 25 mm. Right margin: not marked.

Reason: The orientation label changes the width and height order compared with portrait. The right margin has no printed boundary, so it is recorded as not marked rather than estimated.

Check: Confirm the width value is larger than the height value and that the landscape label is present. Confirm the right margin entry says not marked.

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Original tasks 3, 4 / complete keys

Task 3

A line-spacing value is recorded as 9.0 mm baseline-to-midline. Convert this value to centimetres and inches to one decimal place, and state one check using the inch value.

Answer: 9.0 mm equals 0.9 cm and 0.4 inches to one decimal place. Check: 0.9 cm times 10 equals 9.0 mm, which returns to the original value. For inches, 9.0 mm divided by 25.4 equals 0.3543..., which rounds to 0.4 inches; reversing, 0.4 inches times 25.4 equals 10.16 mm, which does not round to 9.0 mm, so the one-decimal inch value is a rounded restatement and the original 9.0 mm value should remain visible.

Reason: Divide by ten for centimetres and by 25.4 for inches. Rounding to one decimal place loses precision, so the original millimetre value is kept for checking.

Check: Multiply the centimetre value by ten and confirm it returns to 9.0 mm. Divide 9.0 mm by 25.4 and confirm the result rounds to the recorded inch value; then note that multiplying the rounded inch value by 25.4 does not return exactly to 9.0 mm because one decimal place is coarse.

Task 4

A sheet has three baseline-to-baseline gaps of 7.5 mm, 7.9 mm, and 7.7 mm. A second set of three gaps on the same sheet is 7.6 mm, 7.8 mm, and 7.7 mm. Record one median line-spacing value for the sheet and explain why a single value is used.

Answer: Combined ordered gaps: 7.5, 7.6, 7.7, 7.7, 7.8, 7.9. The median is the average of the two middle values, 7.7 and 7.7, which is 7.7 mm baseline-to-baseline. A single value is used so the chart row is comparable and checkable.

Reason: With six measurements, the median is the mean of the third and fourth ordered values. Both middle values are 7.7 mm, so the median is 7.7 mm. The method label stays baseline-to-baseline.

Check: Order all six values and confirm the third and fourth values are both 7.7 mm. Confirm the method label is present and that no baseline-to-midline value was mixed into the set.

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Task 1, Task 2 / Separate answer page

Separate answer page listing the four practice answers, reasoning, and check methods. Kept separate so the worksheet can be used for practice.

Exercise 1 answer: Sheet size: 148 mm by 210 mm, portrait. Line spacing: median of 6.0, 6.2, and 6.1 is 6.1 mm, baseline-to-baseline. Top margin: 15 mm.

Exercise 1 reasoning: The median is the middle value when the three gaps are ordered: 6.0, 6.1, 6.2. The middle value is 6.1 mm. The method label is required because the gaps were measured baseline-to-baseline.

Exercise 1 check method: Order the three gaps again and confirm the middle value is 6.1 mm. Confirm the sheet dimensions are written width by height with the portrait label.

Exercise 2 answer: Sheet size: 297 mm by 210 mm, landscape. Left margin: 25 mm. Right margin: not marked.

Exercise 2 reasoning: The orientation label changes the width and height order compared with portrait. The right margin has no printed boundary, so it is recorded as not marked rather than estimated.

Exercise 2 check method: Confirm the width value is larger than the height value and that the landscape label is present. Confirm the right margin entry says not marked.

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Task 3, Task 4 / Separate answer page (continued)

Continued answer page for exercises 3 and 4.

Exercise 3 answer: 9.0 mm equals 0.9 cm and 0.4 inches to one decimal place. Check: 0.9 cm times 10 equals 9.0 mm, which returns to the original value. For inches, 9.0 mm divided by 25.4 equals 0.3543..., which rounds to 0.4 inches; reversing, 0.4 inches times 25.4 equals 10.16 mm, which does not round to 9.0 mm, so the one-decimal inch value is a rounded restatement and the original 9.0 mm value should remain visible.

Exercise 3 reasoning: Divide by ten for centimetres and by 25.4 for inches. Rounding to one decimal place loses precision, so the original millimetre value is kept for checking.

Exercise 3 check method: Multiply the centimetre value by ten and confirm it returns to 9.0 mm. Divide 9.0 mm by 25.4 and confirm the result rounds to the recorded inch value; then note that multiplying the rounded inch value by 25.4 does not return exactly to 9.0 mm because one decimal place is coarse.

Exercise 4 answer: Combined ordered gaps: 7.5, 7.6, 7.7, 7.7, 7.8, 7.9. The median is the average of the two middle values, 7.7 and 7.7, which is 7.7 mm baseline-to-baseline. A single value is used so the chart row is comparable and checkable.

Exercise 4 reasoning: With six measurements, the median is the mean of the third and fourth ordered values. Both middle values are 7.7 mm, so the median is 7.7 mm. The method label stays baseline-to-baseline.

Exercise 4 check method: Order all six values and confirm the third and fourth values are both 7.7 mm. Confirm the method label is present and that no baseline-to-midline value was mixed into the set.

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Worked example / Worked example

Worked example from the source: portrait 210 mm by 297 mm, median 8.0 mm baseline-to-baseline, left margin 20 mm, conversions 0.8 cm and 0.3 inches.

Prompt: A sheet is measured in portrait orientation. Width is 210 mm and height is 297 mm. Three baseline-to-baseline gaps are 7.8 mm, 8.0 mm, and 8.1 mm. The left margin from the paper edge to the nearest vertical rule is 20 mm. Record the sheet size, the median line spacing with its method label, and the left margin. Then convert the median spacing to centimetres and inches to one decimal place.

Answer: Sheet size: 210 mm by 297 mm, portrait. Line spacing: median of 7.8, 8.0, and 8.1 is 8.0 mm, baseline-to-baseline. Left margin: 20 mm. Conversion: 8.0 mm equals 0.8 cm and 0.3 inches to one decimal place. Check: 0.8 cm times 10 equals 8.0 mm, which returns to the original value. For inches, 8.0 mm divided by 25.4 equals 0.3149..., which rounds to 0.3 inches; reversing, 0.3 inches times 25.4 equals 7.62 mm, which does not round to 8.0 mm, so the one-decimal inch value

is a rounded restatement and the original 8.0 mm value must remain visible.

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Source rubric / reflection

- [ ] Every measurement includes a unit and a reference point.
- [ ] Line spacing uses one stated method throughout, either baseline-to-baseline or baseline-to-midline.
- [ ] Sheet dimensions include an orientation label.
- [ ] Margin entries state the edge measured and whether the margin is marked or not marked.
- [ ] Converted values keep the original millimetre value visible for checking.
- [ ] The chart records measured paper rather than assumed nominal sizes.
- [ ] The chart does not present line spacing as a handwriting standard; x-height is baseline to midline and letter styles vary.
- [ ] Valid alternative measurements are accepted when the method and reference point are stated clearly.

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