Black and White Negative Space: Stacked Chairs Drawing Study

Original tasks 1, 2, 3 / complete keys

Task 1

A described stack shows three gaps: a large under-seat gap, a medium gap between two legs, and a small gap inside a backrest. Under the convention chairs are white and gaps are black, how many black shapes should appear if no gaps are merged?

Answer: Three black shapes.

Reason: Each gap is negative space and becomes one black shape under the stated convention. No merges are stated, so the count equals the number of gaps.

Check: Count the listed gaps (three) and count the black shapes in your drawing (three). They match.

Task 2

A hypothetical seat height is 50 cm and is drawn as 10 cm. A hypothetical seat depth is 35 cm. Using the same scale, what drawn length represents the seat depth?

Answer: 7 cm.

Reason: Scale ratio: 50 cm real to 10 cm drawn, so 1 cm drawn equals 5 cm real. Seat depth: 35 divided by 5 equals 7 cm drawn.

Check: Multiply 7 cm drawn by 5 to get 35 cm real; the ratio matches the seat height ratio.

Task 3

You identify five gaps but draw only four black shapes. Under the convention, what is one valid explanation, and what check confirms it?

Answer: Two gaps were intentionally merged into one black shape. The check is to note the merge and confirm that the merged shape covers both gap areas without filling any chair part.

Reason: The convention allows intentional merges if noted. The count difference of one is explained by merging two gaps into one shape.

Check: Compare the gap list to the black shapes; verify the merged shape corresponds to exactly two listed gaps and no white chair part is filled.

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Original tasks 4 / complete keys

Task 4

A drawing states that chairs are black and gaps are white. A viewer sees a white area inside a backrest opening. Is this consistent with the stated convention?

Answer: Yes, if the backrest opening is a gap. Under the inverted convention, gaps are white, so a white gap is consistent.

Reason: The convention is stated as chairs black and gaps white. A backrest opening is negative space, so it should be white under this convention.

Check: Confirm the stated convention and check that the white area is a gap, not a chair part. If it is a gap, the drawing is consistent.

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Source rubric / reflection

- [ ] A convention is stated in one sentence and applied consistently.
- [ ] Every identified gap is either filled according to the convention or noted as an intentional merge.
- [ ] Measured values are labeled as measured; chosen values are labeled as hypothetical.
- [ ] Units are consistent and at least one scale ratio is checked with arithmetic.
- [ ] Outline style, if used, is uniform and intentional.
- [ ] The drawing is black and white only, with no color.
- [ ] Valid alternative conventions are accepted if stated and consistent.

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