Choir Group Sketch: Pose and Spacing Practice

Original tasks 1, 2, 3 / complete keys

Task 1

A practice box is 16 cm wide with 2 cm margins on each side. You want five singers in one row. Find the equal gap between adjacent centers.

Answer: Usable width is 16 − 2 − 2 = 12 cm. Five singers have four gaps, so each gap is 12 ÷ 4 = 3 cm.

Reason: Subtract both margins first, then divide by the number of gaps, which is one fewer than the number of singers.

Check: Add four gaps of 3 cm and two margins of 2 cm: 4×3 + 2×2 = 16 cm, matching the box width.

Task 2

A front row has four singers with 4 cm gaps and 1 cm margins. What is the total width used?

Answer: Three gaps of 4 cm give 12 cm, plus two margins of 1 cm give 2 cm, for a total of 14 cm.

Reason: Four singers create three adjacent gaps. Add gaps and margins to get total width.

Check: Reverse the arithmetic: 14 − 2 = 12 cm usable, and 12 ÷ 3 = 4 cm per gap.

Task 3

You have a 20 cm wide box with 2 cm margins and want gaps of 4 cm. How many singers fit in one row?

Answer: Usable width is 20 − 2 − 2 = 16 cm. With 4 cm gaps, the number of gaps is 16 ÷ 4 = 4, so the number of singers is 4 + 1 = 5.

Reason: Divide usable width by gap size to get the number of gaps, then add one for the number of singers.

Check: Five singers give four gaps: 4×4 + 2×2 = 20 cm, matching the box width.

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Original tasks 4 / complete keys

Task 4

A back row is raised by half an x-height. If the x-height is 6 cm, how much is the back-row baseline raised, and what vertical clearance remains if the front-row head top is 2 cm above the midline?

Answer: The back-row baseline is raised by 3 cm. The front-row head top is 6 + 2 = 8 cm above the front baseline. The back-row midline is 3 + 6 = 9 cm above the front baseline, so the back-row midline is 1 cm above the front-row head top.

Reason: Half of 6 cm is 3 cm. Add the x-height to the raised baseline to find the back-row midline, then compare with the front-row head top.

Check: Subtract front-row head top from back-row midline: 9 − 8 = 1 cm clearance. If negative, reduce the raise or adjust head placement.

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Source rubric / reflection

- [ ] All front-row center marks are present and adjacent gaps are equal within a small measuring error.
- [ ] Each singer has a visible baseline-to-midline axis and a head placed above the midline.
- [ ] At least two pose variants are used while centers remain fixed.
- [ ] Back-row baseline is raised consistently and does not collide with front-row heads.
- [ ] The arithmetic check (gaps plus margins equals paper width) is shown or stated.
- [ ] Valid alternatives in body proportions and letter styles are accepted if spacing and axes remain clear.

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