Market Scene Drawing: Stall Layout, Figures, and Crowd Composition

Original tasks 1, 2, 3 / complete keys

Task 1

A frame is 20 cm wide and 15 cm high, divided into 5 cm squares. How many squares are in the grid? If a walkway uses one row of four squares, how many squares remain?

Answer: The grid has 4 columns and 3 rows, so 12 squares. Removing one row of four squares leaves 8 squares.

Reason: 20 divided by 5 equals 4 columns; 15 divided by 5 equals 3 rows; 4 times 3 equals 12 squares. One row has 4 squares, so 12 minus 4 equals 8.

Check: Recount columns and rows on the frame, multiply, then subtract the walkway row.

Task 2

A walkway is 18 cm long. Each figure circle is 3 cm wide, and you want one circle of empty space between clusters. If each cluster uses two circles, how many clusters fit along the walkway?

Answer: Two clusters fit, using 18 cm total: two circles at 3 cm each plus one 3 cm gap equals 9 cm per cluster, and 18 divided by 9 equals 2 clusters.

Reason: Each cluster occupies two figure circles plus one gap: 3 plus 3 plus 3 equals 9 cm. The walkway is 18 cm, so 18 divided by 9 equals 2 clusters. The initial answer of three was corrected by the arithmetic.

Check: Add the widths for one cluster, divide the walkway length by that width, and confirm the total does not exceed 18 cm.

Task 3

A test figure has an x-height of 2 cm from baseline to midline. A second figure is drawn with an x-height of 3 cm. What is the difference in x-height, and which figure is proportionally taller under this convention?

Answer: The difference is 1 cm, and the second figure is proportionally taller.

Reason: 3 cm minus 2 cm equals 1 cm. A larger x-height means a larger baseline-to-midline distance, so the second figure is taller under the stated convention.

Check: Subtract the smaller x-height from the larger and compare the baseline-to-midline distances directly.

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Original tasks 4 / complete keys

Task 4

A market frame has three stall rectangles, each 6 cm wide, placed along a 24 cm row with equal gaps between and at the ends. What is each gap if the stalls and gaps exactly fill the row?

Answer: Each gap is 1.5 cm. Three stalls use 18 cm, leaving 6 cm for four gaps, and 6 divided by 4 equals 1.5 cm.

Reason: Three stalls at 6 cm each equal 18 cm. The row is 24 cm, so 24 minus 18 equals 6 cm remaining. With gaps at both ends and between stalls, there are four gaps, so 6 divided by 4 equals 1.5 cm.

Check: Add three stall widths and four gap widths: 18 plus 6 equals 24 cm, matching the row length.

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Source rubric / reflection

- [ ] Stall layout uses a grid or clear spacing plan, with stall fronts facing a walkway.
- [ ] Figures are placed with circles or equivalent space reservations and labelled by role.
- [ ] X-height convention is stated and used proportionally; valid alternative letter styles are accepted.
- [ ] Crowd clusters leave readable gaps and do not hide stall fronts or labels.
- [ ] At least one open path crosses the scene and can be identified from a distance.
- [ ] Measurements and hypothetical numerical values are labelled as examples, not fixed standards.

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