How to Draw a Combusken Pixel Character on Graph Paper

Original tasks 1, 2 / complete keys

Task 1

A pixel character is planned in a bounding box 10 squares wide and 14 squares tall. The color key has three colors. After coloring, the counts are 50 squares of color A, 40 squares of color B, and 30 squares of color C. Does the total match the bounding box? Show the arithmetic.

Answer: No. The color total is 50 + 40 + 30 = 120 squares. The bounding box is 10 × 14 = 140 squares. The difference is 20 squares.

Reason: Multiply width by height to get the box total, add the color counts, and compare. A mismatch means some squares are uncolored, double-counted, or outside the box.

Check: Recount one color row by row and verify that every colored square lies inside the labeled bounding box.

Task 2

On row 7 of a symmetric pixel character, the centerline column is counted as part of the left side. The left side has 6 colored squares including the centerline, and the right side has 5 colored squares. Is the row symmetric under this counting rule? If not, state one correction.

Answer: The counts are compatible with a symmetric row: the left count includes the center cell, so the paired left count is 6 - 1 = 5, matching the right count 5. Do not add or remove a cell merely to make the inclusive counts equal. To confirm actual symmetry, compare the positions and colors of all five left/right mirror pairs; counts alone do not prove those match.

Reason: A colored center column mirrors to itself. Symmetry compares the noncentral cells in pairs. Under this rule the inclusive left total is one larger than the right total even for a perfectly symmetric row.

Check: Subtract the one center cell from the inclusive left count: 6 - 1 = 5. Compare those five cells with the five right cells by equal distance from the centerline and matching color. Correct only an actual unmatched pair, not the expected one-cell inclusive-count difference.

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Original tasks 3, 4 / complete keys

Task 3

A student measures one graph-paper square as 4 mm. The character is 18 squares tall. What is the drawn height in millimeters? If the student later measures a different square as 5 mm, what would the height be? Label both values as hypothetical examples.

Answer: With a 4 mm square, the height is 18 × 4 = 72 mm. With a 5 mm square, the height is 18 × 5 = 90 mm. Both are hypothetical examples based on the stated measurements.

Reason: Multiply the number of squares by the measured square size. The result changes when the actual paper measurement changes, so always measure the paper in use.

Check: Measure the drawn height with a ruler and compare it with the calculated value; if they differ, re-measure the square size and recount the rows.

Task 4

A color key lists R for red, O for orange, and K for black. A student colors 12 red squares, 24 orange squares, and 8 black squares. The planned total inside the bounding box is 50 squares. How many squares are unaccounted for, and what is one checkable next step?

Answer: The colored total is 12 + 24 + 8 = 44 squares. The unaccounted number is 50 − 44 = 6 squares. One next step is to scan the bounding box row by row for uncolored squares and mark each with its intended key symbol before coloring.

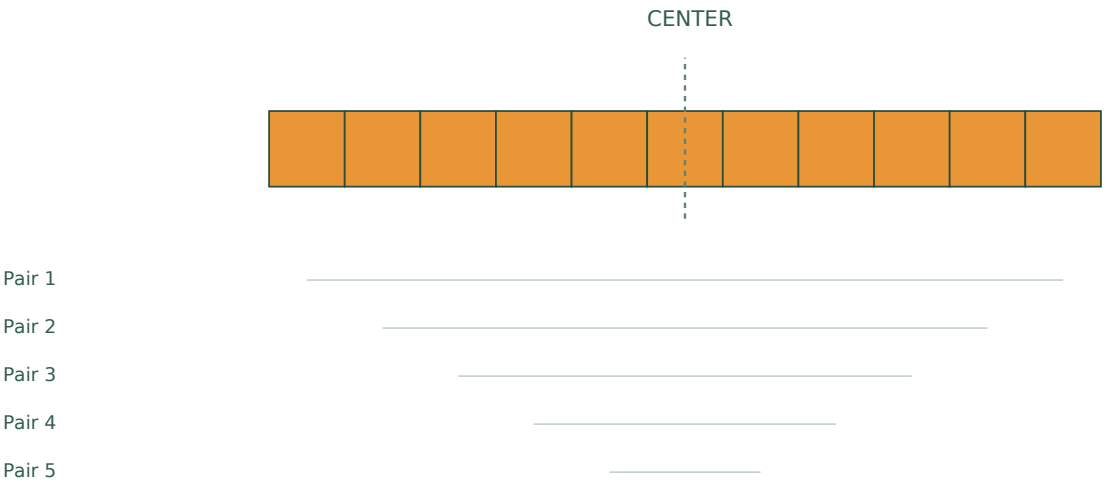
Reason: Subtract the colored total from the planned total to find the gap. Scanning row by row locates the missing squares without guessing.

Check: After marking the six squares, recount each color and confirm the new totals add to 50.

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Task 2 / answers

Counted original pixel drawing / chosen cell sizes are labelled / not a game-sprite copy

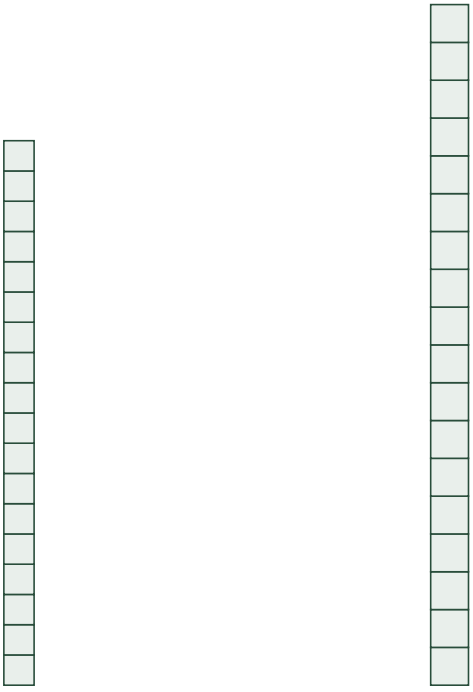


Five left/right pairs plus one self-mirroring center. Inclusive left = 6; right = 5. Positions AND colors in this drawn row match; the counts alone would not prove that.

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Task 3 / answers

Counted original pixel drawing / chosen cell sizes are labelled / not a game-sprite copy



18 x 4 = 72 mm

18 x 5 = 90 mm

Both strips print at actual 1:1 size. These are the hypothetical paper measurements in the original question, not printing standards.

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Source rubric / reflection

- [ ] Bounding box is labeled with counted width and height in squares.
- [ ] One graph-paper square is measured and the size is recorded in millimeters.
- [ ] A color key with color names and symbols is present and legible in any handwriting style.
- [ ] Colored squares stay inside grid lines and within the bounding box.
- [ ] Symmetry or intentional asymmetry is checked by counting from the centerline and documented.
- [ ] Color totals are written and added; the sum is compared with the bounding-box total.
- [ ] Labels include grid dimensions, square size, and color totals.
- [ ] Valid alternatives are accepted when counting, key consistency, and documentation are correct.

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