Contour Line Drawing of a TV: A Focused Outline Study

Original tasks 1, 2 / complete keys

Task 1

A TV silhouette is drawn 24 cm wide and 16 cm tall. The actual TV is 72 cm wide and 48 cm tall. Calculate both width-to-height ratios and state whether they match within a hypothetical tolerance of plus or minus 0.1.

Answer: Drawn ratio: 24 divided by 16 equals 1.5. Actual ratio: 72 divided by 48 equals 1.5. The difference is 0, so they match within the tolerance.

Reason: Divide width by height for each pair. Compare the two ratios by subtraction. A difference of 0 is inside plus or minus 0.1.

Check: Recompute both divisions and subtract the smaller ratio from the larger. Confirm the result is less than or equal to 0.1.

Task 2

In a blind-contour box, a student draws the top edge, right edge, bottom edge, and left edge but lifts the pencil three times. The circuit is complete. Using the rubric, state one improvement and one valid alternative that would still be accepted.

Answer: Improvement: keep the pencil down for one full circuit to meet the blind-contour condition. Valid alternative: a slightly curved top edge is acceptable if the silhouette remains closed and the edge relationships hold.

Reason: The rubric requires one full circuit without lifting the pencil. Line style is not fixed, so curved versus straight edges are valid alternatives as long as the contour is closed.

Check: Compare the drawing to the rubric items: pencil-lift condition and closed silhouette. Confirm the alternative does not break edge relationships.

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Original tasks 3, 4 / complete keys

Task 3

A slow-contour drawing shows a bezel with a 3 cm left margin and a 5 cm right margin on a 30 cm wide silhouette. The TV's actual bezel margins are equal. State the mistake and a fix using only contour lines.

Answer: Mistake: the bezel is not centered inside the silhouette. Fix: redraw the bezel as a closed contour with equal left and right margins, using the silhouette edges as reference points.

Reason: Equal margins are an edge relationship. The contour study checks relationships, not shading. Redrawing the bezel contour corrects the relationship without adding perspective lines.

Check: Measure both margins on the drawing. Confirm they are equal within your chosen tolerance, and confirm the bezel remains inside the silhouette.

Task 4

A TV has three visible buttons along the bottom bezel. In a slow-contour box, describe how to draw them using the button convention, and state one check that they are correctly placed.

Answer: Draw one short contour segment for each visible button boundary, spaced along the bottom bezel. Check that no button contour crosses the bezel edge and that all three sit within the bezel area.

Reason: The convention uses short segments for visible button edges and omits hidden buttons. Placement is checked by containment within the bezel contour.

Check: Trace each button segment and confirm it stays inside the bezel. Count the segments and compare to the number of visible buttons.

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Source rubric / reflection

- [ ] Silhouette is drawn as a single continuous contour with no shading.
- [ ] Bezel is a closed contour inside the silhouette with consistent left and right margins.
- [ ] Stand edges and floor contact line are included and level.
- [ ] Visible button edges are drawn as short contour segments without inventing hidden buttons.
- [ ] Width-to-height ratio of the drawn silhouette is within the chosen tolerance of the measured TV ratio.
- [ ] Blind-contour box shows one full circuit without lifting the pencil or looking at the paper.
- [ ] Valid alternatives are accepted: curved or straight edges, different line weights, and omitted hidden features.

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