Contour Bottle Drawing: Neck, Shoulder, and Base Edges

Original tasks 1, 2 / complete keys

Task 1

A bottle has body width 50 units, neck width 20 units, and shoulder height 12 units. Describe the near-side outer contour from base to neck, including the neck-to-shoulder curve.

Answer: The body sides are 50 units apart; the neck sides are 20 units apart and centered. The horizontal inset per side is (50-20)/2 = 15 units, and the shoulder rises 12 units vertically. These are separate measurements: the inset is horizontal and the shoulder height is vertical, so they need not be equal. Draw the shoulder as a smooth convex curve that leaves the neck line tangentially and joins the body line tangentially; a straight 45-degree diagonal would not be tangent to the vertical lines. The outer contour runs up one body side, curves through the shoulder, up the neck, across the opening, and back down the far side.

Reason: The widths and shoulder height define the transition points. Tangency prevents a sharp corner, and centering keeps the neck aligned with the body.

Check: Measure the drawn body width and neck width in the same unit; confirm they match 50 and 20. Confirm the shoulder rises 12 units vertically and the inset is 15 units horizontally, treating them as independent measurements. Slide a straight edge along the neck and body lines to check the shoulder curve meets without an angle.

Task 2

A bottle has a base edge height of 6 units and a body width of 40 units. Describe how to draw the base edge and one interior contour for the bottom rim.

Answer: Draw the body sides 40 units apart down to the base. Close the base with a line that rises 6 units at the center or follows the measured base curve. Add an interior contour for the bottom rim only if the rim is visible, keeping it inside the base edge and stopping where the surface turns away.

Reason: The base edge height and body width set the bottom boundary. The interior rim contour records a visible surface change without outlining hidden geometry.

Check: Confirm the base edge spans 40 units and its height is 6 units in the same unit. Check that the interior rim line stays inside the outer contour and does not cross it.

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Original tasks 3, 4 / complete keys

Task 3

A bottle has a neck width of 18 units and a body width of 54 units. The shoulder is a hard shoulder with a short horizontal step. Describe the near-side contour through the neck-to-shoulder transition.

Answer: Draw the neck sides 18 units apart and the body sides 54 units apart. Choose a vertical position for the hard shoulder and mark it on both sides. At that height, draw a horizontal step from the neck edge outward to the body edge; the step extends horizontally by (54-18)/2 = 18 units on each side. Then continue down the body side from the outer end of the step. The step is a justified hard shoulder, not a smooth curve, so the contour turns sharply at the step rather than blending tangentially.

Reason: The measured widths define the step length. A hard shoulder is valid when the reference shows a sharp transition; the contour still follows visible edges.

Check: Measure the neck and body widths in one unit and confirm 18 and 54. Check that each horizontal step measures (54-18)/2 = 18 units and connects the neck edge to the body edge without gaps, and that no curve is added where the reference shows a hard shoulder.

Task 4

A bottle is asymmetric: near-side body width is 44 units, far-side body width is 48 units, and neck width is 20 units. Describe how to draw both outer contours and one interior contour for the far-side neck edge.

Answer: Mark the midline and draw the near-side body edge 44 units from it and the far-side body edge 48 units from it. Draw the neck edges 20 units apart, centered on the midline. The near and far shoulder curves connect their own body edges to the neck edges. Add an interior contour for the far-side neck edge only if the opening is visible, stopping where the neck turns away.

Reason: Asymmetric widths require separate measurements for each side. The interior neck contour records a visible far-side edge without mirroring the near side.

Check: Measure each body width from the midline in the same unit and confirm 44 and 48. Check that the neck width is 20 units and that the interior neck contour does not cross the outer contour.

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Source rubric / reflection

- [ ] Outer contour is a continuous line that follows the visible silhouette from base edge to neck opening and back.
- [ ] Neck-to-shoulder transition is drawn as a curve tangent to both the neck and body lines, or as a justified hard shoulder if the reference shows one.
- [ ] Shoulder-to-base edge and base edge match the measured proportions in one consistent unit.
- [ ] Interior contours appear only at visible transitions and do not outline hidden edges.
- [ ] Valid alternatives are accepted when edge logic and measured proportions are consistent, even if letter styles or curve shapes differ.

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