Snout Perspective Drawing: Foreshortened Planes and Nostril Placement

Original tasks 1, 2, 3 / complete keys

Task 1

A front face is 60 mm wide and 36 mm high. The stated taper ratio is 0.75. Calculate the next cross-section width and height, and state where the nostril centers go under the 3 by 3 grid convention.

Answer: Next width is 45 mm; next height is 27 mm. Nostril centers go at the left-third and right-third intersections with the lower third of the front face.

Reason: Multiply 60 by 0.75 to get 45 mm, and 36 by 0.75 to get 27 mm. The grid convention places both centers on the lower-third line, one cell in from each side.

Check: Measure the drawn next cross-section against 45 mm and 27 mm, and measure each nostril center's distance from the midline; the two distances should match.

Task 2

A drawing shows a front face 40 mm wide and a next cross-section 34 mm wide. The stated ratio is 0.8. Is the drawing consistent with the stated ratio, and what is the measured ratio?

Answer: No, it is not consistent. The measured ratio is 34 divided by 40 equals 0.85, not 0.8.

Reason: The stated ratio predicts 32 mm. The measured 34 mm gives 0.85, so either the drawing or the stated ratio must be corrected.

Check: Re-measure both widths with the same ruler and recompute the division; confirm the result matches the ratio written beside the drawing.

Task 3

A front face is 30 mm wide and 24 mm high. Using the 3 by 3 grid convention, give the grid cell dimensions and a hypothetical nostril oval size that fits inside one cell.

Answer: Each cell is 10 mm wide and 8 mm high. A hypothetical oval of 6 mm by 4 mm fits inside one cell.

Reason: Divide 30 by 3 to get 10 mm and 24 by 3 to get 8 mm. The oval must be smaller than the cell in both directions.

Check: Measure the drawn grid cells and the oval; confirm the oval's width is less than 10 mm and its height is less than 8 mm.

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Original tasks 4 / complete keys

Task 4

A muzzle box has a front face 50 mm wide and 30 mm high, a taper ratio of 0.6, and a vanishing direction down and to the right. Give the next cross-section dimensions and describe how the side plane should appear.

Answer: Next width is 30 mm and next height is 18 mm. The side plane should taper toward the lower right, becoming narrower and shorter along the axial line.

Reason: Multiply 50 by 0.6 to get 30 mm and 30 by 0.6 to get 18 mm. The vanishing direction down and to the right means the taper shifts in that direction.

Check: Measure the next cross-section against 30 mm and 18 mm, and confirm the side plane's edges converge toward the marked vanishing arrow.

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Source rubric / reflection

- [ ] Front face is the largest cross-section and is clearly labeled.
- [ ] At least two cross-sections follow the stated taper ratio within the drawing tolerance.
- [ ] Top, side, and bottom planes are readable as trapezoids tapering toward the vanishing direction.
- [ ] Both nostrils lie on the front plane and are symmetric about the vertical midline within tolerance.
- [ ] Nostril ovals align with the front plane's horizontal direction.
- [ ] Vanishing arrow, taper ratio, and grid convention are written beside the drawing.
- [ ] No fur texture or full head construction is included.

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