Animal Symmetry Drawing: Complete the Mirrored Half

Original tasks 1, 2 / complete keys

Task 1

A half-animal reference has a nose tip on the axis at row 4, an eye centre at row 6 and column distance 1 left, and a front leg joint at row 9 and column distance 2 left. State the reflected positions and describe how to connect them.

Answer: Nose tip stays on the axis at row 4. Eye centre reflects to row 6 and column distance 1 right. Front leg joint reflects to row 9 and column distance 2 right. Connect the nose tip to the eye and leg joint with a smooth contour that mirrors the reference, keeping each matched point at the same row.

Reason: Reflection keeps the row unchanged and maps column distance d on one side to d on the other side. Points on the axis map to themselves.

Check: Count squares from the axis to each point on both sides at the same row; the counts must be equal. Fold along the axis to confirm alignment.

Task 2

A reference shows an ear tip at row 2 and column distance 3 left, a back curve point at row 5 and column distance 4 left, and a tail end at row 8 and column distance 2 left. Complete the mirrored half by listing the reflected points and describing the outline order.

Answer: Ear tip reflects to row 2 and column distance 3 right. Back curve point reflects to row 5 and column distance 4 right. Tail end reflects to row 8 and column distance 2 right. Outline order: start at the nose tip on the axis, curve up to the ear tip, follow the back curve point, then down to the tail end and leg joints, mirroring the reference contour.

Reason: Each point keeps its row and swaps side while keeping the same distance from the axis. The outline order follows the reference from head to tail.

Check: Verify equal square counts at rows 2, 5, and 8 on both sides, then fold along the axis to check that matched features align.

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Original tasks 3, 4 / complete keys

Task 3

A half-animal reference has an eye centre at row 5 and column distance 2 left and a mouth point at row 7 and column distance 1 left. A student reflects the eye to row 6 and column distance 2 right and the mouth to row 7 and column distance 1 right. Identify the error and give the correct reflection.

Answer: The eye reflection is wrong because the row changed from 5 to 6. The correct eye position is row 5 and column distance 2 right. The mouth reflection is correct: row 7 and column distance 1 right.

Reason: Reflection never changes the row. Only the side and the column distance are mirrored. Changing the row tilts the animal.

Check: Compare row numbers for each matched pair; they must be identical. Count squares from the axis on both sides at the same row.

Task 4

A reference shows a nose tip on the axis at row 3, an ear tip at row 1 and column distance 2 left, and a hind leg joint at row 10 and column distance 3 left. Describe a complete self-check plan for the finished drawing using fold and square counts.

Answer: Fold along the axis and hold to a light to confirm that the ear tip and hind leg joint align with their reflected counterparts. Count squares from the axis at row 1: 2 left and 2 right; at row 10: 3 left and 3 right. Confirm the nose tip remains on the axis at row 3. Check that the outline is level and not tilted, and adjust any point that is off by one or more squares.

Reason: A valid self-check combines a fold comparison with numerical square counts at matched rows, plus a level check for the overall outline.

Check: Repeat the fold and count checks after any adjustment; matched features must sit at the same row and equal distance from the axis.

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Source rubric / reflection

- [ ] Axis is correctly identified as the vertical centre line and used for all measurements.
- [ ] Each key point is reflected to the same row and equal column distance on the opposite side.
- [ ] Outline is smooth and level, with no tilt or stretched proportions.
- [ ] Internal features such as the eye and ear are reflected, not only the outer contour.
- [ ] Self-check is shown: fold comparison or square counts at matched rows.
- [ ] Valid stylistic alternatives are accepted if placement and proportion are correct.

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