Animal Paw Drawing: Compare Pad Shapes and Claw Placement

Original tasks 1, 2 / complete keys

Task 1

Draw two paws in equal 10-square-wide boxes. Paw A has a central pad 5 squares wide and 3 squares high. Paw B has a central pad 4 squares wide and 4 squares high. Both have four toe pads. State the width fraction of each central pad and one check.

Answer: Paw A's central pad occupies 5 out of 10 squares, or one half. Paw B's central pad occupies 4 out of 10 squares, or two fifths. Check: 5 divided by 10 equals 0.5, and 4 divided by 10 equals 0.4, so Paw A's pad is wider relative to the box.

Reason: The width fraction compares pad width to box width using the same unit. Dividing each width by the box width gives a checkable decimal or fraction.

Check: Recount the grid squares for each pad and box, then divide pad width by box width and compare the two results.

Task 2

A paw has four toe pads. You place three solid claw marks and one dashed mark. Using the convention that solid means visible and dashed means hidden, how many visible and hidden claw positions are shown, and what count check applies?

Answer: Three visible claw positions and one hidden claw position are shown. The total number of claw marks is four, which matches the four toe pads.

Reason: Each toe pad should have one claw position under the stated convention. Solid and dashed marks distinguish visible from hidden without changing the count.

Check: Count the toe pads, count the solid marks, count the dashed marks, and confirm that solid plus dashed equals the toe pad count.

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Original tasks 3, 4 / complete keys

Task 3

Paw A's claw marks span 8 grid squares and its central pad is 4 squares wide. Paw B's claw marks span 6 grid squares and its central pad is 3 squares wide. Compare the span-to-pad-width ratio for each paw and state one check.

Answer: Paw A has a ratio of 8 to 4, or 2 to 1. Paw B has a ratio of 6 to 3, or 2 to 1. Both ratios are equal. Check: 8 divided by 4 equals 2, and 6 divided by 3 equals 2.

Reason: The ratio compares claw mark span to central pad width in the same unit. Equal ratios mean the claw span is twice the pad width in both paws.

Check: Measure both spans and both pad widths in grid squares, divide each span by its pad width, and compare the results.

Task 4

You draw three paws in equal 12-square-wide boxes. Paw A's central pad is 6 squares wide, Paw B's is 4 squares wide, and Paw C's is 3 squares wide. List the width fractions in order from largest to smallest and state one check.

Answer: Paw A is 6 out of 12, or one half. Paw B is 4 out of 12, or one third. Paw C is 3 out of 12, or one quarter. Order: Paw A, Paw B, Paw C. Check: 0.5 is greater than about 0.33, which is greater than 0.25.

Reason: Each fraction compares the same kind of pad width to the same box width, so the fractions can be ordered directly. Converting to decimals makes the order checkable.

Check: Divide each pad width by 12, write the decimals, and confirm the order from largest to smallest.

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Source rubric / reflection

- [ ] Convention is stated clearly in three lines: scale, pad outline style, and claw mark style.
- [ ] Two or three paw types are drawn in equal-sized boxes with a shared baseline.
- [ ] Pad shapes are compared using at least one checkable ratio or measurement in consistent units.
- [ ] Claw placement marks follow one rule and the count matches the number of toe pads or stated hidden-claw marks.
- [ ] Comparison notes include one sentence on pad shape and one on claw placement per paw.
- [ ] Valid alternatives are accepted when they follow the stated convention and are applied consistently.

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