Draw a Paw: Pad and Toe Construction Practice

Original tasks 1, 2, 3 / complete keys

Task 1

Draw a paw using a 15 mm unit. Main pad 2 units wide, 1.2 units tall. Four toe pads 0.6 units wide, arc gap 0.3 units. Record measurements.

Answer: Main pad 30 mm wide, 18 mm tall. Toe pads 9 mm wide each. Arc gap 4.5 mm above main pad. Four toe centers evenly spaced.

Reason: Multiply each unit value by 15 mm. Keep the main pad wider than tall and maintain the gap so toe pads do not overlap.

Check: Measure main pad width and height; confirm width is greater. Measure gap; confirm about 4.5 mm. Count four toe pads and check even spacing.

Task 2

A student draws a main pad 25 mm wide and 30 mm tall, with toe pads touching the main pad. Identify two fixes using this lesson's convention.

Answer: Fix 1: redraw main pad wider than tall, for example 30 mm wide and 18 mm tall. Fix 2: move toe arc up to leave about 0.3 units gap, so toe pads do not touch the main pad.

Reason: The convention requires a wide main pad and a visible gap. Correcting proportions and spacing resolves both issues.

Check: Measure new main pad width and height; confirm width is greater. Check gap between main pad and toe pads is visible.

Task 3

Using a 10 mm unit, place four toe pads 0.6 units wide along an arc. Calculate total toe pad width if placed side by side with no gaps, then explain why spacing matters.

Answer: Each toe pad is 6 mm wide; four side by side total 24 mm. Spacing matters because toe pads should sit in an arc with even gaps, not touch, so the construction stays clear.

Reason: Multiply 0.6 by 10 mm to get 6 mm per pad, then multiply by four. Even spacing prevents overlap and keeps balance.

Check: Measure one toe pad; confirm about 6 mm. Count four pads. Check gaps are roughly equal and pads do not overlap.

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Original tasks 4 / complete keys

Task 4

Draw a paw inside a 60 mm by 40 mm rounded rectangle boundary using a 10 mm unit. Main pad 2 units wide, 1.2 units tall; toe arc gap 0.3 units. Check fit.

Answer: Main pad 20 mm wide, 12 mm tall. Toe pads 6 mm wide each. Arc gap 3 mm. The paw fits within 60 mm by 40 mm with room for claws and margins.

Reason: Convert units to millimeters and compare total height and width to the boundary. The main pad plus toe arc and claws should remain inside.

Check: Measure main pad and toe pads; confirm sizes. Check all parts stay inside the 60 mm by 40 mm boundary with visible margin.

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Source rubric / reflection

- [ ] Main pad is wider than tall and clearly defined.
- [ ] Four toe pads are present and arranged in a balanced arc.
- [ ] Toe pads do not overlap the main pad; gap is visible.
- [ ] Claws are short, simple, and consistently placed.
- [ ] Construction lines are light or erased; final lines are clear.
- [ ] Measurements or unit notes are recorded and consistent.
- [ ] Valid alternative pad shapes are accepted if balance and spacing are clear.

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