Back-of-Hand Drawing: Knuckle Arcs, Tendon Lines, and Wrist Transition

Original tasks 1, 2 / complete keys

Task 1

A back-of-hand drawing uses a hand mass 4 units wide and 2.5 units tall. The wrist is 2 units wide and 1.2 units tall. The knuckle arc rises 0.4 units from index to middle and falls 0.3 units to the little finger. Describe the block-in and knuckle arc placement.

Answer: Draw a 4 by 2.5 unit rounded rectangle for the hand mass and a 2 by 1.2 unit wrist rectangle centered below. Mark four knuckle points along an arc with the middle knuckle highest by 0.4 units and the little finger knuckle lower by 0.3 units. Connect the points with a light arc.

Reason: The block-in fixes the overall proportions. The knuckle arc is not straight; it follows the stated rise and fall. Equal spacing between knuckles is checked by dividing the width into four roughly equal segments.

Check: Measure the hand mass and wrist with a ruler or unit marks. Confirm the middle knuckle is highest and the arc connects all four points. Check that adjacent knuckle spacing is within about 0.2 units of each other.

Task 2

Using the same hand mass as the previous exercise, draw four tendon lines from the wrist transition to the four knuckle points. The lines should converge at the wrist and spread at the knuckles. Describe how you check that the fan is even.

Answer: Draw light lines from the wrist center to each knuckle point. The lines should be closest together at the wrist and farthest apart at the knuckles. Check evenness by comparing the gaps between adjacent lines at the knuckles; they should be roughly equal.

Reason: Tendon lines fan from the wrist. Convergence at the wrist and spreading at the knuckles is the key pattern. Even spacing at the knuckles suggests a consistent fan.

Check: Measure the gaps between adjacent tendon lines at the knuckle arc. If one gap is more than about 0.3 units larger than another, adjust the line positions.

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Original tasks 3, 4 / complete keys

Task 3

A student draws the wrist transition as a sharp right angle. Describe how to fix it and what to check after the fix.

Answer: Replace the sharp angle with a gradual curve that changes direction softly between the forearm and hand. After the fix, check that the curve does not create a bulge and that the hand mass still sits naturally above the wrist.

Reason: The wrist transition is a soft change in direction, not a hard step. A gradual curve reads more naturally and preserves the hand mass proportions.

Check: Trace the wrist transition with a finger; it should feel like a smooth change in direction. Check that the wrist width remains about half the hand mass width, using the stated hypothetical units.

Task 4

You choose a light source from the upper left. Describe where to shade along the tendon lines and under the knuckle arc, and state one valid alternative.

Answer: Shade along the lower right side of each tendon line and under the knuckle arc on the lower right. A valid alternative is a light source from the upper right, in which case shading moves to the lower left, provided it is applied consistently.

Reason: Shading should be consistent with the chosen light direction. The tendon lines and knuckle arc create small ridges, so shadows fall opposite the light.

Check: Check that all shadows fall on the same side relative to the light source. If any shadow contradicts the chosen direction, adjust it.

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Source rubric / reflection

- [ ] Knuckle arc bows slightly toward the fingers and connects four distinct knuckle points.
- [ ] Tendon lines are light, fan from the wrist, and end at the knuckle points without crossing.
- [ ] Wrist transition is a gradual curve, not a hard step.
- [ ] Finger bases align with the tendon lines and knuckle points.
- [ ] Shading is consistent with a stated light direction.
- [ ] Valid alternatives in view angle or light direction are accepted if internally consistent.

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