Masculine Hand Drawing: Knuckle Mass, Wrist Width, and Finger Proportion

Original tasks 1, 2, 3 / complete keys

Task 1

A hand study uses a 12-unit total height. The knuckle line is at 6 units from the bottom. The middle fingertip is at 12 units, the index at 11 units, and the little finger at 9 units. Find the middle, index, and little finger lengths.

Answer: Middle: 12 minus 6 equals 6 units. Index: 11 minus 6 equals 5 units. Little: 9 minus 6 equals 3 units.

Reason: Finger length is the fingertip height minus the knuckle-line height, using the same unit scale.

Check: Add each finger length back to the knuckle-line height: 6 plus 6 equals 12, 5 plus 6 equals 11, and 3 plus 6 equals 9.

Task 2

A planned masculine hand has a wrist width of 4 units and a palm width of 6 units. How much width is added on each side of the centerline if the expansion is split evenly?

Answer: The total expansion is 6 minus 4 equals 2 units. Split evenly, each side adds 1 unit.

Reason: Palm width minus wrist width gives the total side expansion; dividing by two gives the per-side amount.

Check: Add the two side expansions to the wrist width: 4 plus 1 plus 1 equals 6 units, matching the palm width.

Task 3

A drawing has a wrist width of 3.5 units and a palm width of 5.25 units. Calculate the palm-to-wrist ratio and state whether it matches a planned ratio of 1.5.

Answer: The ratio is 5.25 divided by 3.5 equals 1.5, so it matches the planned ratio.

Reason: The ratio compares palm width to wrist width using the same units.

Check: Multiply the wrist width by the planned ratio: 3.5 times 1.5 equals 5.25, confirming the palm width.

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Original tasks 4 / complete keys

Task 4

On a 10-unit grid, the knuckle line is at 5 units. The ring fingertip is at 9.5 units and the little fingertip is at 8.5 units. Find both finger lengths and the difference between them.

Answer: Ring finger: 9.5 minus 5 equals 4.5 units. Little finger: 8.5 minus 5 equals 3.5 units. The difference is 4.5 minus 3.5 equals 1 unit.

Reason: Subtract the knuckle-line height from each fingertip height, then subtract the smaller length from the larger.

Check: Add the difference to the little finger length: 3.5 plus 1 equals 4.5 units, matching the ring finger length.

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Source rubric / reflection

- [ ] Wrist width and palm width are labeled in consistent units and match the planned values or a clearly stated alternative.
- [ ] Knuckle masses are broad, rounded, and aligned on the knuckle line, with the middle two slightly larger in the chosen convention.
- [ ] Finger lengths are derived from fingertip heights minus the knuckle-line height and are internally consistent.
- [ ] The palm-to-wrist ratio is calculated and matches the drawing within the stated tolerance.
- [ ] Alternative hand shapes are accepted if their own measurements and arithmetic checks are consistent.

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