Draw a Simplified Hand with Blocky Finger Shapes

Original tasks 1, 2 / complete keys

Task 1

Draw a simplified hand with a palm 4 units wide and 5 units high. Use finger lengths 4, 5, 4, and 3 units. Attach a thumb 2 units long and 1 unit wide to the side. State the average finger length.

Answer: The average finger length is (4+5+4+3)/4 = 16/4 = 4 units. The middle finger is longest at 5 units and the little finger is shortest at 3 units.

Reason: The palm is a rounded rectangle 4 by 5 units. Four blocky fingers attach to the top edge with the given lengths. The thumb attaches to the side. The average is calculated by adding the four finger lengths and dividing by four.

Check: Count four finger blocks, confirm the middle finger is longest, confirm the thumb is on the side, and recompute 16 divided by 4 equals 4.

Task 2

A student draws a palm 6 units high and four fingers of lengths 5, 7, 5, and 4 units. The thumb is 3 units long and attached to the top edge. Identify two mistakes and give a fix for each.

Answer: Mistake one: the thumb is attached to the top edge; fix by attaching it to the side. Mistake two: the second finger is longer than the middle finger if the middle is the third; fix by making the middle finger the longest, for example 5, 6, 5, 4.

Reason: The thumb should be a side block, not a fifth top finger. The proportion guide requires the middle finger to be longest, so the finger lengths must be adjusted.

Check: Check thumb position against the side of the palm and compare finger lengths to confirm the middle finger is longest.

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Original tasks 3, 4 / complete keys

Task 3

Using a palm 5 units wide and 6 units high, choose finger lengths so the average is 5 units and the middle finger is longest. Draw the hand and show your arithmetic.

Answer: One valid choice is 5, 6, 5, and 4 units. The average is (5+6+5+4)/4 = 20/4 = 5 units. The middle finger is 6 units, which is the longest.

Reason: Any four lengths that sum to 20 and have the middle finger longest are valid. The blocky convention and side thumb must still be followed.

Check: Add the four chosen lengths, divide by four, and confirm the result is 5. Confirm the middle finger is the longest block.

Task 4

Draw a simplified hand with a palm 3 units wide and 4 units high. Use finger lengths 3, 4, 3, and 2 units and a thumb 2 units long and 1 unit wide. Mark the baseline and midline. State the palm-to-middle-finger ratio.

Answer: The palm-to-middle-finger ratio is 4 divided by 4, which equals 1.0. The average finger length is (3+4+3+2)/4 = 12/4 = 3 units.

Reason: The palm height is 4 units and the middle finger length is 4 units. The ratio is palm height divided by middle finger length. The baseline is the bottom of the palm and the midline is halfway up.

Check: Confirm the baseline and midline are marked, recompute 4 divided by 4 equals 1.0, and check that the middle finger is longest.

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Source rubric / reflection

- [ ] Palm is drawn as a rounded rectangle with a marked baseline and midline.
- [ ] Four finger blocks are rectangles with rounded corners and consistent width convention.
- [ ] Middle finger is longest and little finger is shortest according to the chosen values.
- [ ] Thumb is attached to the side of the palm, not the top edge.
- [ ] Average finger length arithmetic is shown and correct for the chosen values.
- [ ] Valid alternative styles are accepted if the blocky convention and proportion check are followed.

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