Anime Body Proportion Practice: Head-Count and Limb-Length Guides

Original tasks 1, 2, 3 / complete keys

Task 1

A 5H figure is drawn with H = 3 cm. The upper arm is 0.8H and the forearm is 0.7H. Calculate the figure height, the upper arm length in centimeters, and the forearm length in centimeters.

Answer: Figure height = 5 × 3 cm = 15 cm. Upper arm = 0.8 × 3 cm = 2.4 cm. Forearm = 0.7 × 3 cm = 2.1 cm.

Reason: Multiply the head-count by H for total height. Multiply each limb fraction by H to convert to centimeters. Keep all values in centimeters.

Check: Add upper arm and forearm: 2.4 cm + 2.1 cm = 4.5 cm. Divide by H: 4.5 ÷ 3 = 1.5H, which equals 0.8H + 0.7H.

Task 2

A 7H figure has its crotch at 3.5H. The thigh is 1.3H and the lower leg is 1.2H. Calculate the knee height and the ankle height in H units. Then state whether the ankle is above or below the 7H total.

Answer: Knee height = 3.5H + 1.3H = 4.8H. Ankle height = 4.8H + 1.2H = 6.0H. The ankle is below the 7H total by 1.0H.

Reason: Add the thigh fraction to the hip line to find the knee. Add the lower-leg fraction to the knee to find the ankle. Compare the result with the total head-count.

Check: Subtract the ankle height from the total: 7.0H − 6.0H = 1.0H. The remaining distance is positive, so the ankle is below the top of the head line.

Task 3

A figure uses H = 2.5 cm and a total of 6H. The drawn ankle is measured at 14 cm from the top of the head. The planned hip line is 3H, thigh is 1.2H, and lower leg is 1.1H. Calculate the planned ankle height in centimeters and state the difference from the drawn ankle.

Answer: Planned ankle height = (3 + 1.2 + 1.1)H = 5.3H. In centimeters, 5.3 × 2.5 cm = 13.25 cm. The drawn ankle is 14 cm − 13.25 cm = 0.75 cm lower than planned.

Reason: Add the H fractions for hip, thigh, and lower leg, then multiply by H. Subtract the planned value from the drawn value to find the difference.

Check: Convert the difference back to H units: 0.75 cm ÷ 2.5 cm = 0.3H. Check that 5.3H + 0.3H = 5.6H, and 5.6 × 2.5 cm = 14 cm.

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Original tasks 4 / complete keys

Task 4

A 6H figure has H = 4 cm. The upper arm is 1.0H and the forearm is 0.9H. The shoulder is placed at 1.5H. Calculate the elbow height and wrist height in H units and in centimeters. Then check whether the wrist is above or below the 3H hip line.

Answer: Elbow height = 1.5H + 1.0H = 2.5H. Wrist height = 2.5H + 0.9H = 3.4H. In centimeters: elbow = 2.5 × 4 cm = 10 cm; wrist = 3.4 × 4 cm = 13.6 cm. The wrist is below the 3H hip line by 0.4H, or 1.6 cm.

Reason: Add the upper-arm fraction to the shoulder line for the elbow, then add the forearm fraction for the wrist. Multiply by H for centimeters. Compare the wrist height with 3H.

Check: Subtract the hip line from the wrist height: 3.4H − 3.0H = 0.4H. Multiply by H: 0.4 × 4 cm = 1.6 cm. The positive result confirms the wrist is below the hip line.

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Source rubric / reflection

- [ ] The chosen head-count is written on the page and used consistently.
- [ ] Grid lines are marked at whole H intervals from 0H to the total.
- [ ] Limb lengths are recorded as fractions of H and match the drawn segments.
- [ ] Arithmetic checks use one consistent unit and are shown or stated.
- [ ] Labels are readable and placed on the correct grid lines using the downward-from-0H convention; valid letter-style alternatives are accepted.
- [ ] Paired limbs use equal fractions unless asymmetry is intentional and noted.

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