Drawing a Mother and Child Pair: Relative Scale and Pose

Original tasks 1, 2 / complete keys

Task 1

An adult head unit is 3 cm and the adult is 6 head units tall. A child head unit is 2.5 cm and the child is 4 head units tall. Compute both heights and the ratio. Describe one standing contact point.

Answer: Adult height = 18 cm; child height = 10 cm; ratio = 10 ÷ 18 ≈ 0.56. A valid contact point is the child's hand on the adult's hip.

Reason: Multiply head unit by head-unit count for each figure, then divide child height by adult height. The contact point must physically link the two figures.

Check: Recompute 3 × 6 = 18 and 2.5 × 4 = 10. Confirm the ratio is less than 1 and that the described contact point involves touching or overlap.

Task 2

A seated adult has a head unit of 2 cm and is 7 head units tall when standing, but seated height is about 4 head units from seat to head top. The child head unit is 1.8 cm and seated height is 3 head units. Compute seated heights and state where the child's shoulder should overlap the adult.

Answer: Adult seated height = 8 cm; child seated height = 5.4 cm. The child's shoulder may overlap the adult's upper arm or side, with the child seated beside the adult's hip.

Reason: Use seated head-unit counts, not standing counts, because the seat shortens the vertical measure. The overlap location follows from the contact point chosen for the seated variant.

Check: Verify 2 × 4 = 8 and 1.8 × 3 = 5.4. Check that the stated overlap is a touching relationship, not a gap.

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Original tasks 3, 4 / complete keys

Task 3

An adult head unit is 2.2 cm and the adult is 7.5 head units tall. A child head unit is 2.2 cm and the child is 4.5 head units tall. Compute both heights. Then explain whether the child's head unit being equal to the adult's is acceptable in this convention.

Answer: Adult height = 16.5 cm; child height = 9.9 cm. Equal head units are acceptable because the child's proportionally larger head is expressed through fewer total head units, not necessarily a smaller absolute head unit.

Reason: The convention measures head height directly; the child's larger head-to-body ratio appears as a lower head-unit count. The arithmetic stays consistent in the same unit.

Check: Recompute $2.2 \times 7.5 = 16.5$ and $2.2 \times 4.5 = 9.9$. Confirm the child is shorter and that the explanation refers to head-unit count, not absolute head size alone.

Task 4

A standing pair has an adult height of 20 cm and a child height of 12 cm. The child's shoulder line is drawn at 9 cm from the ground. The adult's waist is at 10 cm from the ground. State whether the shoulder-to-waist relationship is plausible and give one adjustment if not.

Answer: The child's shoulder at 9 cm is close to the adult's waist at 10 cm, which is plausible for a standing embrace. If the shoulder were at 6 cm, it would be too low; raise the child's position or lower the adult's waist line by adjusting one figure only.

Reason: Compare vertical landmark heights in the same unit. A small difference between child shoulder and adult waist supports a connected standing pose.

Check: Subtract the two heights: $10 - 9 = 1$ cm difference. Confirm the adjustment changes only one figure and preserves the stated heights.

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Source rubric / reflection

- [ ] Relative scale: child height is consistently smaller than adult height using stated head-unit counts and checkable arithmetic.
- [ ] Pose connection: at least one clear contact point links the two figures, such as hand on waist or arm around shoulder.
- [ ] Landmark alignment: child eye, shoulder, and hip lines relate plausibly to adult landmarks for the chosen pose.
- [ ] Ground or seat contact: standing feet touch the ground line, or seated hips rest on the seat surface.
- [ ] Valid alternatives: different contact points and pose variants are accepted if the scale arithmetic and connection check pass.

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