Draw a Seated Figure at a Desk: Contact Points and Arm Reach

Original tasks 1, 2, 3 / complete keys

Task 1

A seat line is 10 units wide with a contact patch 3 units wide. The torso rises 8 units to the shoulder. The desk edge is 6 units in front of the torso. The upper arm is 4 units and the forearm is 4 units. The straight-line shoulder-to-hand distance is 7 units. State whether the hand reaches the desk and give the combined arm length.

Answer: The hand reaches the desk. Combined arm length is 4 + 4 = 8 units, and 7 is less than 8.

Reason: Reach is valid when the straight-line shoulder-to-hand distance is less than or equal to the sum of upper-arm and forearm lengths. Here 7 ≤ 8, so the arm can reach without overstretch.

Check: Add the two arm segments, compare with the shoulder-to-hand distance, and confirm the elbow can sit between shoulder and hand.

Task 2

A figure has a torso line that starts 2 units above the seat contact patch. The seat contact patch is 4 units wide. Identify the contact error and describe the correction in one sentence.

Answer: The torso starts above the seat, so the figure floats. Move the pelvis down until its lowest edge rests on the contact patch, then redraw the torso from there.

Reason: Seat contact requires the lowest part of the torso to meet the seat. Starting 2 units above breaks that contact and makes the pose unsupported.

Check: Trace the torso line downward and confirm it meets the contact patch rather than stopping above it.

Task 3

A seated figure has an upper arm of 6 units and a forearm of 3 units. The hand is drawn 10 units from the shoulder in a straight line. Is the reach valid? Explain using the combined length.

Answer: No. Combined arm length is 6 + 3 = 9 units, and 10 is greater than 9, so the hand is beyond the arm's reach.

Reason: The straight-line distance from shoulder to hand must not exceed the sum of the two arm segments. Here 10 > 9, so the drawn hand is too far for the drawn arm.

Check: Add upper arm and forearm, compare with the shoulder-to-hand distance, and if the distance is larger, move the desk closer or adjust the lean.

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Original tasks 4 / complete keys

Task 4

A chair has no backrest. The seat contact patch is 5 units wide, the foot meets the floor, and the hand reaches the desk with a combined arm length of 9 units and a shoulder-to-hand distance of 8 units. Which rubric item is not applicable, and is the pose otherwise supported?

Answer: Backrest contact is not applicable. The pose is otherwise supported by seat contact, foot contact, and valid arm reach.

Reason: Without a backrest there is no backrest contact to check. Seat contact, foot contact, and reach within combined arm length provide the support.

Check: Confirm the chair has no backrest, then verify seat contact, foot contact, and that shoulder-to-hand distance is less than or equal to combined arm length.

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Source rubric / reflection

- [ ] Seat contact patch is present and the pelvis rests on it.
- [ ] Torso angle is consistent from pelvis to shoulder area.
- [ ] Elbow lies between shoulder and hand.
- [ ] Hand reaches the desk without exceeding combined arm length.
- [ ] Foot meets the floor or footrest.
- [ ] No unintended overlaps between thigh, seat, lower leg, and desk.

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