SUV Drawing: Body Shape and Wheel-Arch Construction

Original tasks 1, 2 / complete keys

Task 1

Draw an SUV body box 20 cm long and 10 cm tall. Use a 12 cm wheelbase, 4 cm front overhang, and 4 cm rear overhang. Mark axle centers and draw two arches with a hypothetical peak height of 2 cm and width of 4 cm. Check that the overhangs and wheelbase sum to the body length.

Answer: Body box 20 cm by 10 cm; wheelbase 12 cm; front overhang 4 cm; rear overhang 4 cm. Sum: 4+12+4=20 cm. Axle centers at the midpoints of the wheelbase ends. Each arch is 4 cm wide and peaks 2 cm above its axle center.

Reason: The overhang and wheelbase values must add to the total length. Arch width and peak height are applied symmetrically to both axles.

Check: Measure the body box length and confirm 4+12+4=20 cm. Measure each arch width and peak height and compare them.

Task 2

Using a body box 18 cm long and 9 cm tall, place a beltline 1.5 cm above the arch peaks. Draw a window band 2 cm tall above the beltline and divide it into a windshield, two side windows, and a rear window with even gaps. Describe how you check the gaps.

Answer: The beltline sits 1.5 cm above the arch peaks. The window band is 2 cm tall above the beltline. The band is divided into four window sections with equal gaps. Check gaps by measuring each gap with the same ruler and confirming they match within your chosen tolerance.

Reason: A consistent beltline and window band height keep the layout coherent. Even gaps are checked by direct measurement.

Check: Measure the beltline height above the arch peaks, the window band height, and each gap between windows.

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Original tasks 3, 4 / complete keys

Task 3

Draw an SUV with a slightly squared wheel-arch convention instead of a rounded curve. Use a hypothetical arch width of 5 cm and peak height of 2 cm on both sides. Explain how you keep the two arches consistent.

Answer: Both arches use the same squared convention, 5 cm wide and 2 cm peak height. Consistency is kept by marking the same width and peak height on each side before drawing the curves.

Reason: The rubric allows valid alternatives if both sides match. Pre-marking dimensions prevents drift between arches.

Check: Measure the width and peak height of each arch and confirm they match.

Task 4

Draw an SUV body box 22 cm long and 11 cm tall. Use a 14 cm wheelbase, 4 cm front overhang, and 4 cm rear overhang. Add a beltline 1 cm above the arch peaks and a window band 2 cm tall. Check that the total length is consistent and that the window band sits above the beltline.

Answer: Body box 22 cm by 11 cm; wheelbase 14 cm; overhangs 4 cm each. Sum: 4+14+4=22 cm. Beltline 1 cm above arch peaks; window band 2 cm tall above the beltline.

Reason: The length check confirms the layout. The beltline and window band heights are measured from the arch peaks upward.

Check: Confirm 4+14+4=22 cm. Measure the beltline height above the arch peaks and the window band height above the beltline.

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Source rubric / reflection

- [ ] Body box proportions are consistent and clearly taller than a passenger car profile.
- [ ] Wheel arches are centered on axle marks and share the same width and peak height.
- [ ] Beltline is continuous and windows sit above it with even gaps.
- [ ] Construction guides are light and refined lines are clear.
- [ ] Valid stylistic alternatives (such as squared arches) are acceptable if consistency is maintained.

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