Drawing Vehicles: Wheel Placement, Chassis Line, and Body Proportion

Ordinary topic reference / separately checked pixels



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Original worked example / unchanged complete key

Prompt: On a page with a baseline and midline 40 mm apart, place two wheel centers 80 mm apart on the baseline. Draw wheels with 15 mm radius. Draw a chassis line through the wheel centers. Build a lower body box spanning the wheelbase with height 40 mm and width 110 mm. Add a cabin box 60 mm wide and 32 mm high, set back 20 mm from the front wheel center. Check that the lower body box touches the chassis line and that the cabin sits within the lower body footprint.

Answer: The drawing shows two wheels on the baseline, a chassis line through their centers, a lower body box of 110 mm by 40 mm, and a cabin box of 60 mm by 32 mm set back from the front wheel. The x-height is 40 mm, the wheelbase is 80 mm, and the wheel radius is 15 mm. The lower body height equals one x-height, and the cabin height is 0.8 x-height. The cabin width is about 0.55 of the lower body width, and the front overhang is 20 mm from the front wheel center to the body edge.