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

Original task 1 / independent drawing and calculation

Task 1

Side view: baseline and midline are 30 mm apart. Wheel centers are 70 mm apart on the baseline. Wheel radius is 12 mm. Draw a chassis line through the centers. Lower body box height is 30 mm and width is 95 mm. Cabin box is 50 mm wide and 24 mm high, set back 15 mm from the front wheel center. Check that the lower body touches the chassis line and the cabin sits within the lower body footprint.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 2 / independent drawing and calculation

Task 2

Three-quarter view: baseline and midline are 35 mm apart. Near wheel center is on the baseline; far wheel center is 5 mm above the baseline and 60 mm to the right. Wheel radius is 14 mm. Chassis line connects the two centers. Lower body box height is 35 mm and width is 100 mm. Cabin box is 55 mm wide and 28 mm high, set back 18 mm from the near front wheel center. Check that the near wheel touches the baseline and the chassis line connects the centers.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 3 / independent drawing and calculation

Task 3

Side view with a longer wheelbase: baseline and midline are 25 mm apart. Wheel centers are 90 mm apart on the baseline. Wheel radius is 10 mm. Lower body box height is 25 mm and width is 115 mm. Cabin box is 60 mm wide and 20 mm high, set back 25 mm from the front wheel center. Check that the lower body box spans the wheelbase and the cabin sits within the lower body footprint.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 4 / independent drawing and calculation

Task 4

Three-quarter view with a shorter wheelbase: baseline and midline are 28 mm apart. Near wheel center is on the baseline; far wheel center is 4 mm above the baseline and 50 mm to the right. Wheel radius is 11 mm. Lower body box height is 28 mm and width is 85 mm. Cabin box is 45 mm wide and 22 mm high, set back 12 mm from the near front wheel center. Check that the near wheel touches the baseline and the cabin height relates to the x-height.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

Full drawing sheet / reusable blank workspace

Reusable full drawing sheet for Tasks 1 to 4. Print another copy when needed. Keep all original task measurements; if a task specifies larger paper, use that paper size.