Draw a Drum Set: Kit Layout and Hardware Construction

Original tasks 1, 2, 3 / complete keys

Task 1

Using a grid where one square equals one unit, place a bass drum at (0,0) with example diameter 20 units, a snare at (-5,3) with diameter 13 units, and a hi-hat at (-9,1). Describe the overhead plan and state one connection check.

Answer: Draw labeled circles at the three coordinates inside a footprint rectangle; add a hi-hat tripod mark and a bass drum pedal footprint at bottom center. Connection check: the snare must touch a stand collar and the hi-hat must sit on its rod.

Reason: Coordinates fix positions; diameters set circle sizes. The check confirms no floating items.

Check: Measure each circle against its unit diameter and trace one connector line per item.

Task 2

A front-view bass drum has example diameter 24 units and shell depth 8 units. Draw it with front hoop, depth band, rear hoop, two spurs, and a pedal footprint. State how you show hidden depth.

Answer: Draw a 24-unit circle for the front hoop, two horizontal depth lines 8 units apart behind it, a partly hidden rear hoop, spurs angled outward, and a pedal footprint at bottom center. Hidden depth is shown with dashed lines for the rear hoop.

Reason: Depth band separates front and rear hoops; dashed lines follow the stated convention for hidden edges.

Check: Confirm the depth band measures 8 units and that dashed lines are used only for hidden rear hoops.

Task 3

Place two rack toms above a bass drum on a shared post, a floor tom to the right on three legs, and a ride cymbal on a tripod stand to the right. Describe the connector lines you draw and run the hardware-connection checklist.

Answer: Draw a vertical post from the bass drum shell to a T-joint, short arms to each tom, three floor tom legs touching the floor, and a ride stand rod with tripod and tilted cymbal. Connector lines join post to bass drum, arms to toms, legs to floor tom, and rod to tripod. Checklist: every item touches hardware; no floating drums or cymbals.

Reason: Shared post reduces stand count; connector lines show real joints only.

Check: Trace each connector line to a hardware joint and confirm three floor contact points for the floor tom.

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Original tasks 4 / complete keys

Task 4

Design a four-piece kit (bass drum, snare, one rack tom, one crash) in overhead plan and front view using a single unit. State your convention and one valid alternative that would still score fully.

Answer: Plan: bass drum at center, snare left-front, rack tom above bass drum, crash on a tripod to the right; front view carries the same unit diameters and shows post, stand, and pedal. Convention: solid outlines, dashed hidden hoops, circles for bases, single labels. Valid alternative: a left-handed mirror layout with the same connection logic scores fully.

Reason: A single unit keeps plan and front view consistent; the rubric rewards coherence, not one fixed arrangement.

Check: Measure diameters against the unit, confirm every item connects to hardware, and verify the convention is applied throughout.

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Source rubric / reflection

- [ ] Overhead plan shows throne, bass drum, snare, toms, floor tom, and cymbals with labels.
- [ ] Front view carries consistent unit values from the plan.
- [ ] Every drum and cymbal connects to a stand, mount, or leg.
- [ ] Pedal footprints are placed and connected logically.
- [ ] Convention is stated and applied consistently; valid alternative layouts score fully if internally coherent.

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