Sagittarius Drawings: Glyph Strokes and Archer Constellation

Original tasks 1, 2, 3 / complete keys

Task 1

Draw the Sagittarius glyph with a hypothetical x-height of 18 mm. Use an open arrowhead and place the crossbar one third from the tail. Describe your stroke order.

Answer: A valid answer draws a baseline and midline 18 mm apart, marks tail and tip, draws the shaft, adds the crossbar one third from the tail, and adds two arrowhead strokes meeting at the tip.

Reason: The x-height sets the band, the crossbar position follows the stated fraction, and the open arrowhead uses two strokes.

Check: Measure the baseline-to-midline gap with a ruler and confirm it is 18 mm; check that the crossbar is closer to the tail than the tip.

Task 2

Plot stars A(1,6), B(3,7), C(5,6), D(4,4), E(2,3), F(6,3), G(7,1) on a 10 by 10 grid. Connect A-B-C, C-D-E, and D-F-G. How many lines touch star D?

Answer: Three lines touch star D: C-D, D-E, and D-F.

Reason: Star D appears in the body connection C-D-E and the leg connection D-F-G, so it is an endpoint for three segments.

Check: Count the segments that include D in the connection list and verify on the grid that three lines meet at D.

Task 3

Scale the constellation coordinates from the lesson by 0.8 and round to whole numbers. List the new coordinates for A(2,7), B(4,8), C(6,7), D(5,5), E(3,4), F(7,4), G(8,2).

Answer: A(2,6), B(3,6), C(5,6), D(4,4), E(2,3), F(6,3), G(6,2).

Reason: Multiply each coordinate by 0.8 and round: 2×0.8=1.6→2, 7×0.8=5.6→6, and so on.

Check: Recompute each product and confirm rounding is consistent; check that all new values lie within the 8 by 8 grid (coordinates 1 to 8).

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Original tasks 4 / complete keys

Task 4

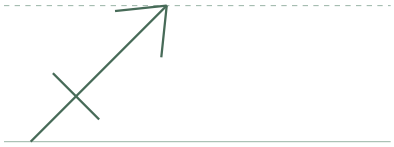
Draw a combined page with the glyph in the upper left and the constellation in the lower right. Use a hypothetical margin of 10 mm and a grid of 8 by 8 units. State one check you would use to confirm the zones do not overlap.

Answer: A valid answer reserves two separate zones, draws the glyph within its x-height band, plots the constellation on the 8 by 8 grid, and checks that the glyph band and grid border are separated by at least the stated margin.

Reason: Separate zones prevent visual confusion, and the margin check is a simple measurable test.

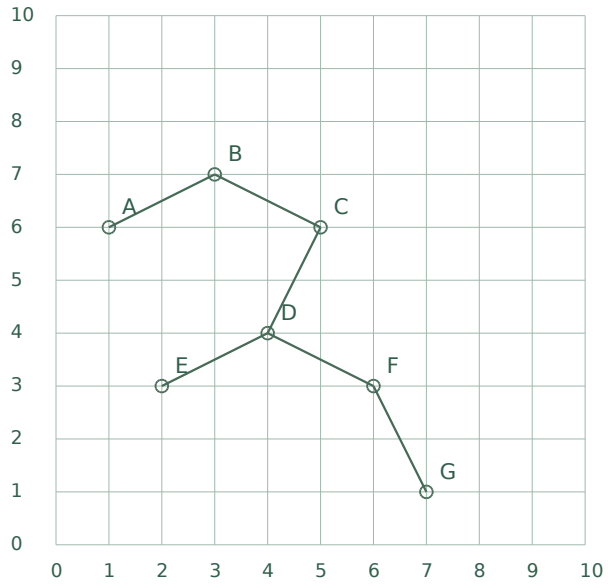
Check: Measure the gap between the glyph band and the grid border with a ruler and confirm it is at least 10 mm.

Chosen Sagittarius glyph and hypothetical classroom coordinate map



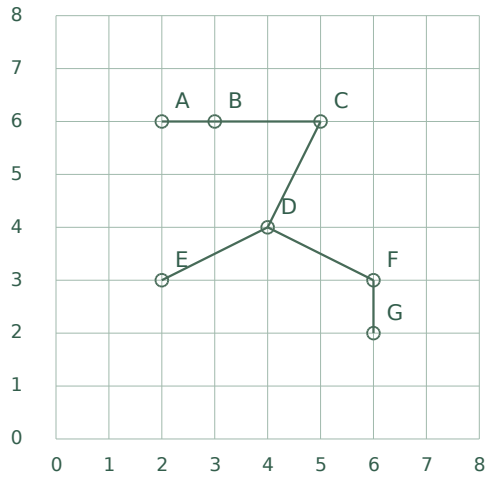
18 mm baseline-to-midline / actual size

Chosen Sagittarius glyph and hypothetical classroom coordinate map



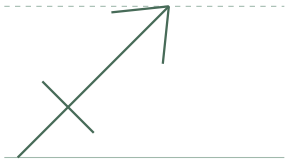
Teaching layout only: these points and lines are not official astronomical star positions. Every labeled star and connecting segment follows the source list.

Chosen Sagittarius glyph and hypothetical classroom coordinate map

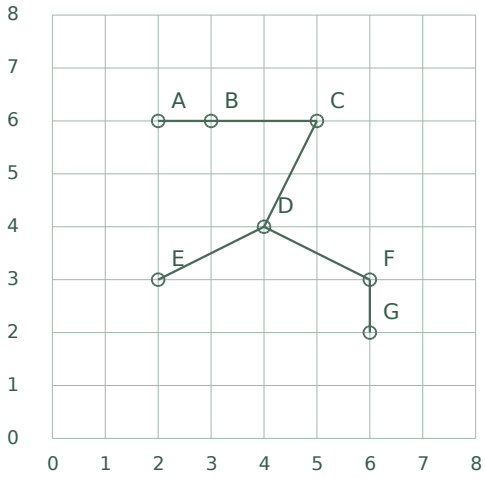


Teaching layout only: these points and lines are not official astronomical star positions. Every labeled star and connecting segment follows the source list.

Chosen Sagittarius glyph and hypothetical classroom coordinate map







Upper-left glyph and lower-right map are separate. The 8 by 8 example uses the rounded 0.8 coordinates. The marked 10 mm gap is printed at actual size.

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Source rubric / reflection

- [ ] Glyph shaft is a single straight stroke within the stated x-height band.
- [ ] Crossbar is near the tail and roughly perpendicular to the shaft.
- [ ] Arrowhead strokes meet at the tip and spread symmetrically.
- [ ] Constellation stars are plotted at labeled coordinates.
- [ ] Connection order matches the stated sequence with no unintended crossings.
- [ ] Labels are legible and do not overlap the glyph band.
- [ ] Valid style alternatives are accepted if the shape remains recognizable.

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