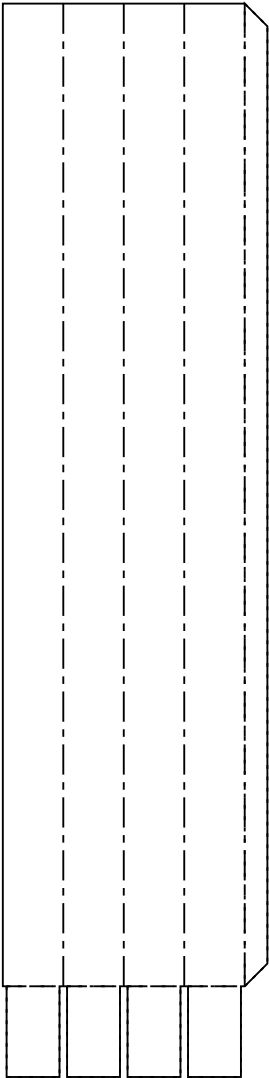


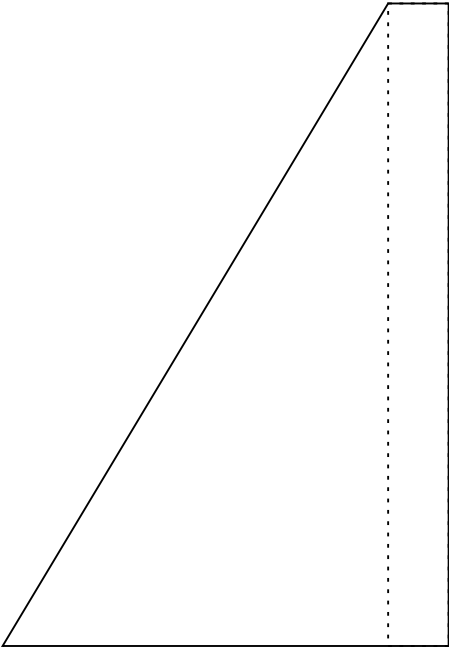
Faceted Display Sailboat

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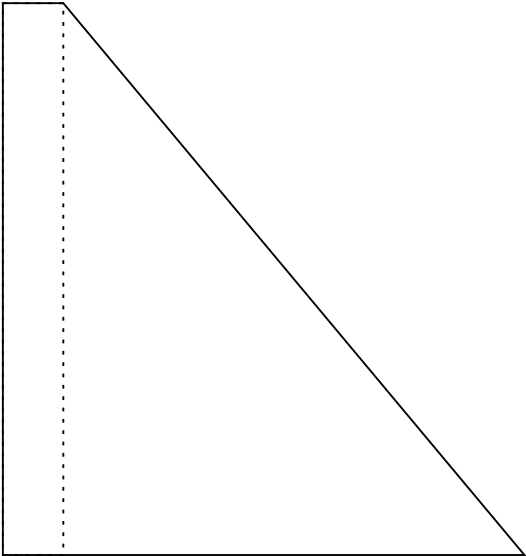
M1 | cut 1
35.00 x 142.00 mm



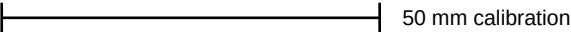
S1 | cut 1
59.00 x 85.00 mm



S2 | cut 1
69.00 x 73.00 mm



Solid: cut | Dashed: valley | Dash-dot: mountain | Dotted: glue

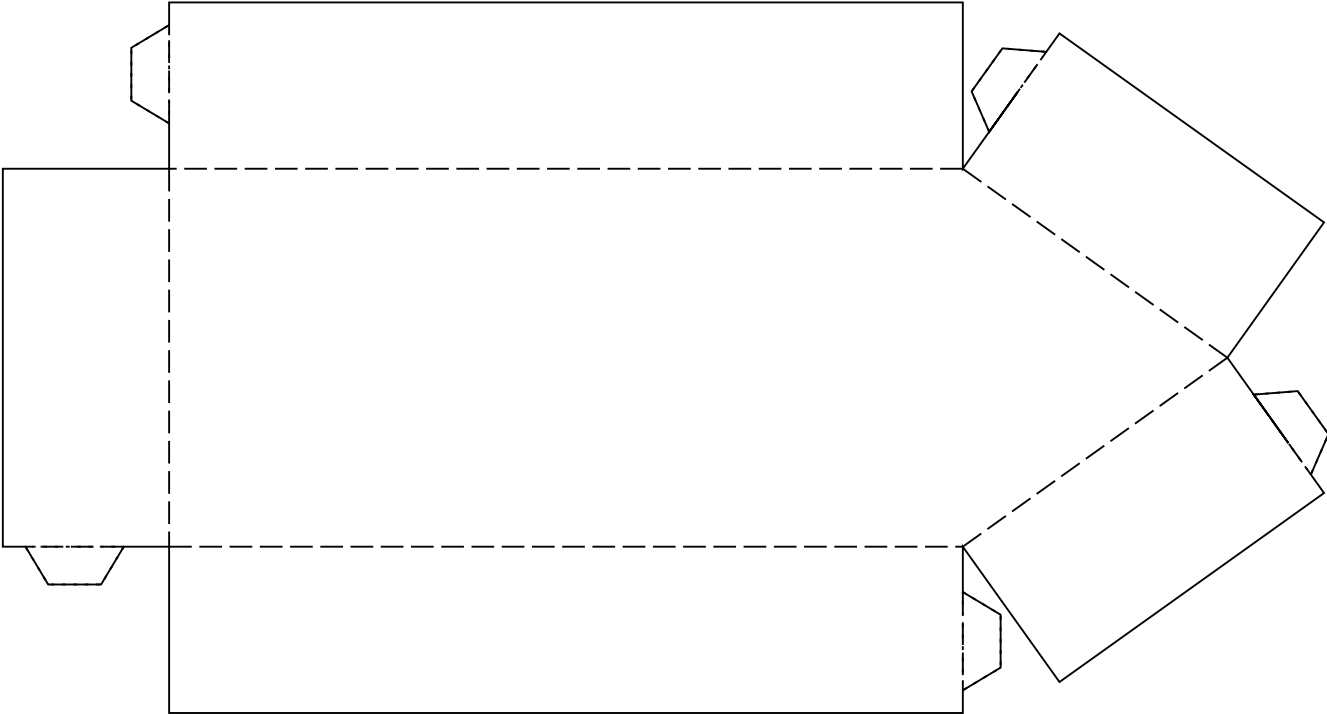


Print at 100% / Actual size. Do not fit to page. Original paper craft template.

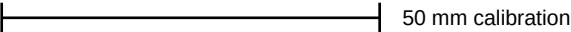
Faceted Display Sailboat

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H1 | cut 1
175.37 x 94.00 mm



Solid: cut | Dashed: valley | Dash-dot: mountain | Dotted: glue



Print at 100% / Actual size. Do not fit to page. Original paper craft template.

Faceted Display Sailboat

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Finished size: 140 long x 50 wide x 130 high mm; hull rim 22 mm high

Materials: 200-240 gsm cardstock for all four supplied parts; Scissors or craft knife and cutting mat (adult supervision); Ruler and blunt scoring tool; PVA craft glue; Small clips and a square corner as temporary drying aids (remove after drying)

Original template. All structural parts are supplied in paper: H1 hull, M1 mast and feet, S1 mainsail, S2 jib. No dowel, wire, rigging, ballast or hidden stand is needed.

Decorative indoor display only. Not waterproof; do not float it, expose it to wind, or use it as a toy boat.

Exact piecewise-planar correspondence includes five hull tabs, the mast seam, four feet and both sail laps. Paper thickness and glue layers are idealized to zero; intended glued surfaces coincide in the mesh.

The 140 x 50 mm flat bottom supports the model; the 32 x 32 mm mast-foot envelope stays inside it. Dry flat before fitting sails. Stability and mast stiffness require physical testing.

Automated checks are not a foldability proof. Screen review and real printing, cutting, gluing and stability testing remain pending. Step views show final part placement, not continuous folding.

Part inventory (cut each instance once):

H1: Five-sided hull with five seam tabs

M1: Square mast with four outward feet

S1: Aft mainsail with 8 mm mast lap

S2: Forward jib with 8 mm mast lap

1. Print and measure [H1]: Print at 100% actual size. Measure the 50 mm ruler before cutting. H1 bottom is 140 mm from flat stern to pointed bow and 50 mm across. Cut H1 perimeter, retaining all five tapered tabs; score its dashed lines.
2. Raise the hull walls [H1]: Put the printed face upward as the inside. Valley-fold each of the five 22 mm wall panels up 90 degrees from the bottom. Keep the pentagonal bottom flat. The pointed end is the bow; the straight 50 mm end is the stern.
3. Close five hull corners [H1]: Fold each 5 mm tapered tab inward onto the inside of the adjacent wall. Match the vertical wall edges flush, with rims level at 22 mm. Apply glue on the tab face touching that wall and clip. Fit the polygon rather than forcing every corner to 90 degrees: stern turns 90 degrees, side-to-bow turns 35.54 degrees, bow turn 108.92 degrees. Let all five seams set flat.
4. Score and close the mast [M1]: Cut M1 including the four separate 7 x 12 mm feet and tapered 3 mm seam. Score the long lines at 8, 16, 24 and 32 mm from the straight strip edge. With print outside, mountain-fold each 90 degrees into an 8 x 8 mm square tube, 130 mm tall. Glue the 3 mm seam inside the first panel; do not glue the feet together. Hold square until set.
5. Spread the mast feet [M1]: Valley-fold all four feet outward 90 degrees at the tube bottom so their undersides share one flat plane. Each foot projects 12 mm. Keep the open tube square, not crushed. Glue goes on the underside of each foot, opposite the printed face.
6. Anchor the mast [H1, M1]: Mark the hull bottom centreline halfway across its 50 mm width. Place the mast centre 60 mm forward of the stern on that line. Align two tube faces parallel to the long hull sides. Its feet span 32 x 32 mm, from 44 to 76 mm forward of the stern. Glue all four feet flat to the floor. Hold the mast vertical with a square corner; allow at least 30 minutes or the glue maker full handling time before adding sails.
7. Attach the aft mainsail [S1, M1]: Cut S1 as one piece, keeping the dotted 8 mm-wide rectangular lap. Leave the sail flat, without folding the lap. Glue the lap against one long-side mast face, with the 51 mm triangular foot pointing toward the stern. Set its lower edge 35 mm above the hull floor (13 mm above the rim); its top is 120 mm above the floor, 10 mm below the mast tip. Press only the lap and let set.

Faceted Display Sailboat

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8. Attach the forward jib [S2, M1]: Cut S2 retaining its 8 mm lap. Glue it flat to the OPPOSITE parallel mast face with the 61 mm triangular foot pointing toward the bow. Align the lower edge at the same 35 mm floor height. Its top reaches 108 mm, leaving 22 mm of mast above. Do not wrap either sail around the mast or join their free edges.

9. Dry and check the display [H1, M1, S1, S2]: Leave upright on a flat dry table until the glue fully cures, preferably overnight. Remove drying aids. Check that the whole bottom sits flat, the mast is upright, all feet stay bonded and the model stands unaided. If it leans or rocks, reseal the feet before the glue sets; record unresolved instability in the first physical trial. Keep away from water and drafts.