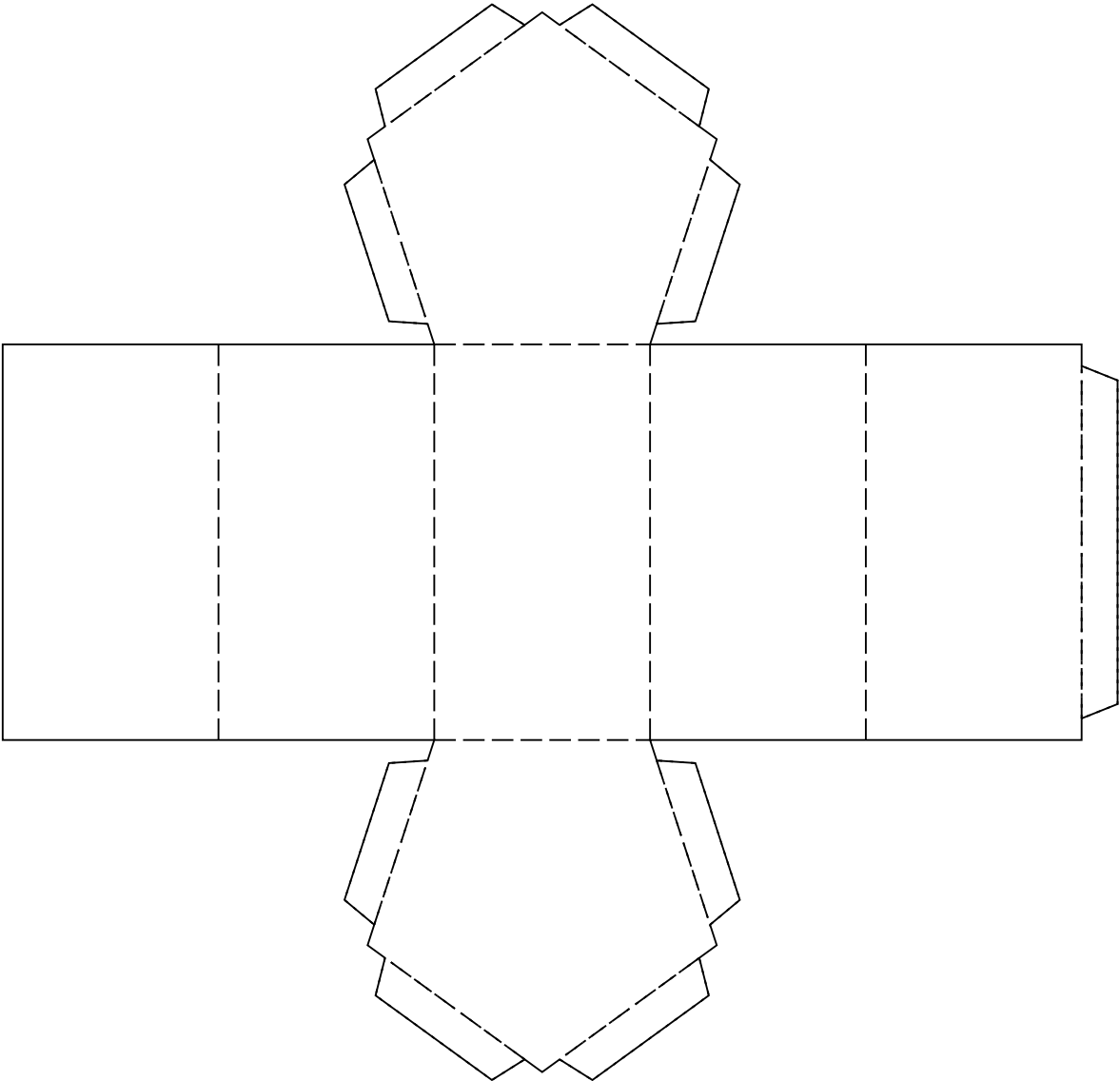


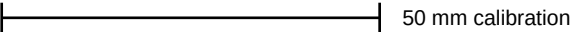
Pentagonal Prism

pentagonal-prism / 1.0.0 / Letter / Template page 1

P1 | cut 1
155.00 x 149.54 mm



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



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

Pentagonal Prism

pentagonal-prism / 1.0.0 / Letter / Assembly instructions

Finished size: 48.54 x 46.17 x 55 mm; pentagon edge 30 mm

Materials: 160-200 gsm paper; Scissors or craft knife; Ruler and blunt scoring tool; PVA glue

Original construction. One physical cut piece; seven shell faces and nine integral tab faces.

Every flat face and tab has an exact rigid 3D correspondence; no stretching or curved forming.

Fold angles are rotations from flat: 72 degrees around the belt (108 degrees internal), 90 degrees at caps and cap tabs.

Zero-thickness idealization: glued tabs coincide with receiving wall interiors. Paper and adhesive thickness and crease allowances are not simulated.

The viewer shows final assembled geometry, not intermediate continuous folding. Physical assembly verification pending.

Part inventory (cut each instance once):

P1: Pentagonal prism net

1. Print and cut [P1]: Print at 100% and check the 50 mm ruler. Cut the single P1 outline, retaining all nine tabs. With the printed face up, orient the five-panel belt horizontally and its long seam tab at the right. Name the rectangles S1-S5 left to right; each is 30 x 55 mm. The pentagons on S3 are B below and T above.
2. Score and pre-fold [P1]: Score all dashed lines. The printed face will be the inside: make valley folds toward yourself. Turn each of the four side creases and the long seam-tab crease 72 degrees from flat (108 degrees interior). Turn both cap hinges and all eight cap tabs 90 degrees from flat. Each pentagon has five 30 mm edges and 108 degree interior corners.
3. Join 1 - close the belt [P1]: Wrap S1-S5 into a regular pentagonal tube. Glue the unprinted face of the 5 mm long tab on S5 to the printed inside of the free vertical edge of S1. Match the 55 mm top and bottom levels, with the S5 tab crease exactly at the S1 cut edge. Hold until dry, leaving both caps open.
4. Joins 2-5 - bottom cap [P1]: Swing B inward 90 degrees on S3. Its four tabs tuck upward inside the tube, overlapping the walls by 5 mm. Glue their unprinted faces to the printed wall interiors: join 2 to S2, join 3 to S1, join 4 to S5, join 5 to S4. Identify each cap edge by the wall it meets when B lies square across the tube. Press each join from the open top and let B dry flat.
5. Joins 6-9 - top cap [P1]: Dry-fit T at 90 degrees to S3 with its tabs pointing down inside. Lift T, apply a thin film of glue to the unprinted tab faces, then lower and tuck all four tabs: join 6 to S2, join 7 to S1, join 8 to S5, join 9 to S4. Align each cap edge flush with the wall rim; gently press the walls against the tabs and hold until set. Do not force the cap below the rim.
6. Finish and dry [P1]: Let all nine joins cure. Check that both ends are parallel, all five long edges are 55 mm, and the pentagonal edges are 30 mm. The finished object is a closed display prism, not an opening box. Physical printing, cutting and assembly verification are pending.