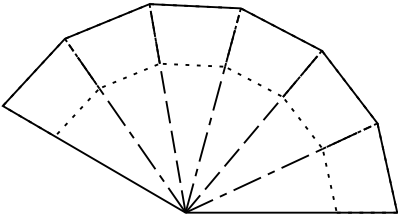


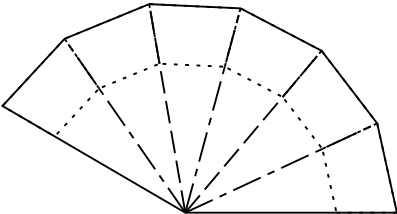
Sector-pleated rosette

pleated-rosette / 1.0.0 / Letter / Template page 1

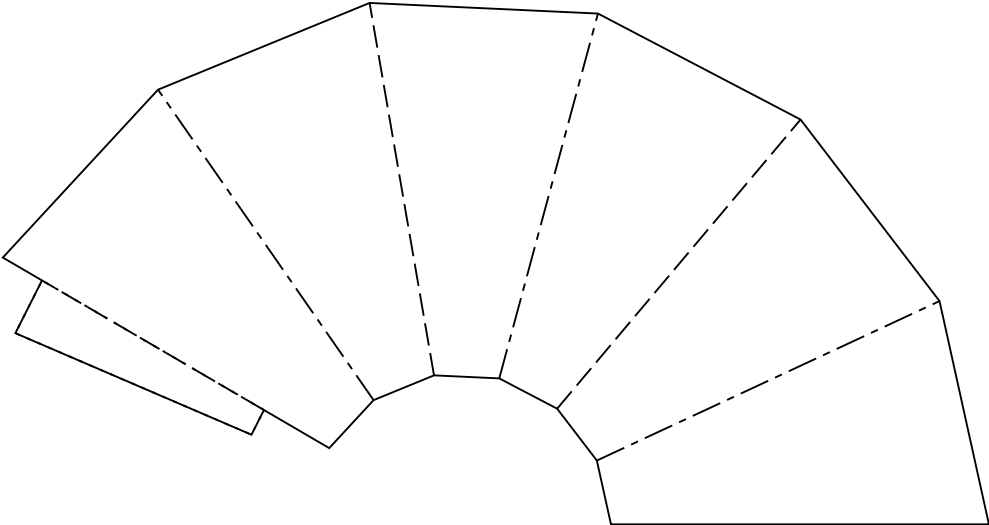
H3 | cut 1
52.18 x 27.59 mm



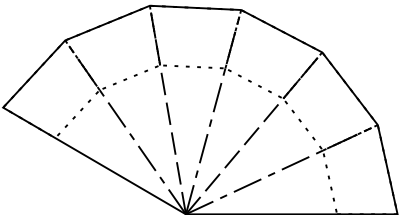
H4 | cut 1
52.18 x 27.59 mm



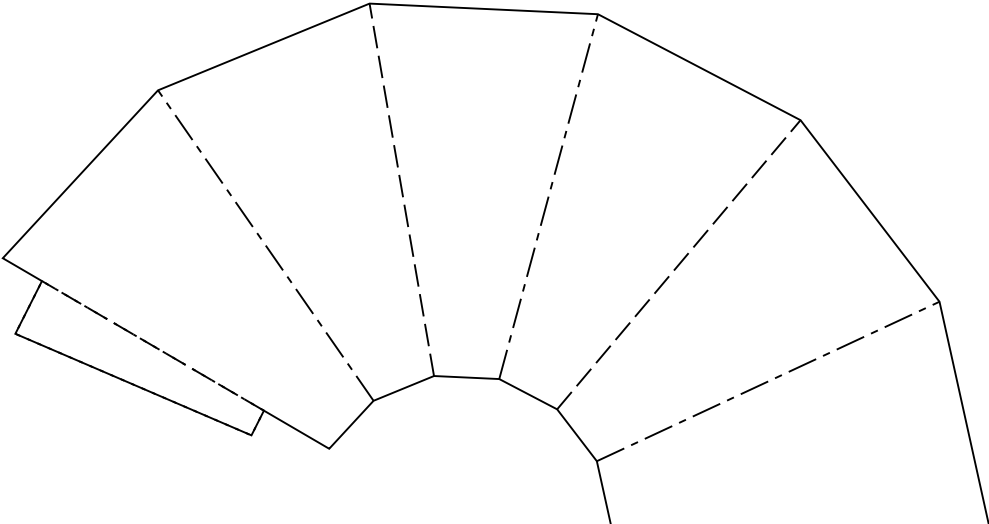
R2 | cut 1
130.45 x 68.98 mm



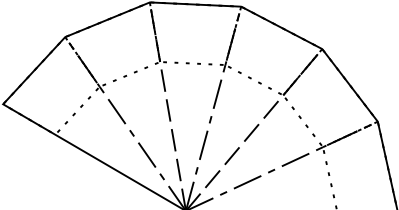
H2 | cut 1
52.18 x 27.59 mm



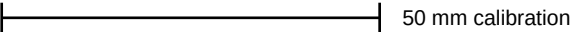
R1 | cut 1
130.45 x 68.98 mm



H1 | cut 1
52.18 x 27.59 mm



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

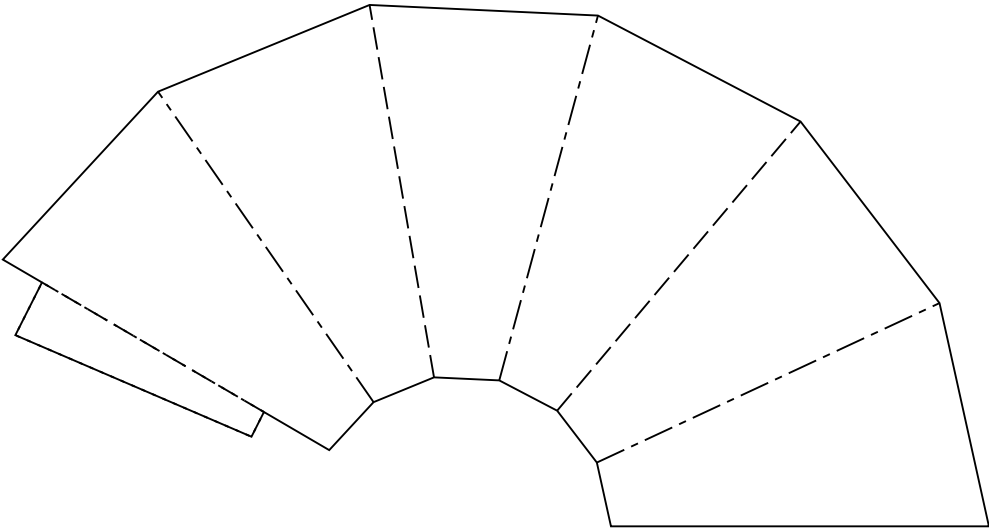


Print at 100% / Actual size. Do not fit to page. Original paper craft template.

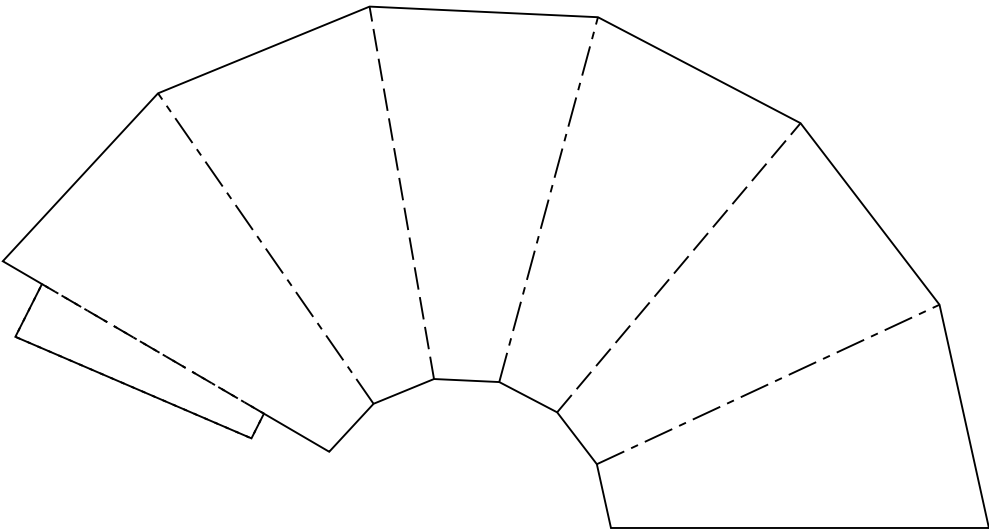
Sector-pleated rosette

pleated-rosette / 1.0.0 / Letter / Template page 2

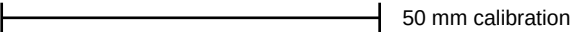
R4 | cut 1
130.45 x 68.98 mm



R3 | cut 1
130.45 x 68.98 mm



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



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

Sector-pleated rosette

pleated-rosette / 1.0.0 / Letter / Assembly instructions

Finished size: 137.87 x 137.87 x 24.31 mm (ideal zero-thickness geometry)

Materials: 100-120 gsm colored paper (all eight pieces); Scissors; Scoring tool and ruler; Protractor; Thin PVA glue; Small clips or tweezers

Original construction. Automated checks do not establish physical buildability; printing, cutting and physical assembly remain pending.

24 facets project to 15 degrees each. Developed facet angle is 24.9541 degrees; each six-facet sector spans 149.7247 degrees before its seam tab. Do not substitute a straight rectangular strip.

Ring radial edges run from 20 to 70 mm measured on paper; hub radial edges run from 0 to 28 mm. The hub overlaps the ring by 8 mm on every facet. Finished projected outer radius is 68.94 mm.

All main creases turn 105.66 degrees from flat (included face angle 74.34 degrees). Odd radial creases are mountains; even creases and sector seams are valleys when viewed from the printed/front side.

Seam tabs extend 7 degrees past the terminal ray between radii 30 and 64 mm; width perpendicular to the crease is 3.66 to 7.80 mm. Tabs lie beneath the next sector first facet.

Meshes preserve all triangle lengths and include tabs and hub overlaps. Paper and glue thickness, score radii, springback and stacked hub tips are not simulated. Coincident glue faces are intentional; never flatten the hub into a disk. This is a static assembly guide, not a fold-motion simulation.

Part inventory (cut each instance once):

R1: Pleated sector 1

R2: Pleated sector 2

R3: Pleated sector 3

R4: Pleated sector 4

H1: Folded hub 1

H2: Folded hub 2

H3: Folded hub 3

H4: Folded hub 4

1. Calibrate and cut [R1, R2, R3, R4, H1, H2, H3, H4]: Print at 100% and check the 50 mm ruler. Cut eight pieces on solid boundaries, retaining the four narrow integral tabs. Keep the printed side facing you and pencil IDs on the backs. Do not cut fold lines.

2. Score the radial accordion [R1, R2, R3, R4]: Score five 50 mm radial lines on each R piece. Starting at the straight edge WITHOUT a tab, alternate mountain, valley, mountain, valley, mountain. Score the 34 mm tab hinge as a valley. Each developed facet spans 24.9541 degrees. Precrease gently, then set all hinges to about 105.66 degrees from flat (included angle 74.34 degrees); do not fold fully shut.

3. Join the first three seams [R1, R2, R3, R4]: Dry-fit R1, R2, R3, R4 counterclockwise around the center, printed faces outward. Each formed sector occupies 90 degrees in plan. Apply a thin film of glue on the printed face of R1 tab and place it UNDER R2 first facet. Butt their straight radial cut edges without overlap of the main panels; match both inner and outer corners. The entire tab is the overlap. Clip until set; repeat R2 to R3 and R3 to R4, letting each seam set.

4. Close the circular pleats [R1, R2, R3, R4]: Dry-close R4 tab beneath R1 first facet. Adjust all folds evenly until the seam edges meet, then glue and hold until set. Do not pull or stretch the panels. The 12 low radial valleys and 12 raised mountains alternate around the ring. Outer peak-to-valley height is 24.31 mm; opposite outer tips span 137.87 mm in plan. Allow the ring seams to dry.

Sector-pleated rosette

pleated-rosette / 1.0.0 / Letter / Assembly instructions continued

5. Pleat the center supports [H1, H2, H3, H4]: Score the five 28 mm radial lines of each H piece. From either straight radial edge the pattern is mountain, valley, mountain, valley, mountain. Use the same 105.66 degree fold rotation as the ring. Handle the common tip carefully; do not add a crease along a cut edge. These four pleated fans support and fill the open center.
6. Glue matching hub facets underneath [R1, R2, R3, R4, H1, H2, H3, H4]: Dry-fit H1 under R1, H2 under R2, H3 under R3 and H4 under R4. Align all six facet directions per pair, printed sides facing the same way. Each hub tip meets the center; its outer 8 mm lies beneath the ring inner edge. Apply glue only to the six dotted 20-28 mm radial bands on each hub printed face. Press each band against the matching ring underside with tweezers and let set before the next hub. Hub radial edges butt together without an extra lap; do not glue the center tips into a thick lump.
7. Dry and inspect [R1, R2, R3, R4, H1, H2, H3, H4]: Let all overlaps dry fully while supporting the pleats loosely, not pressing the rosette flat. Check four closed tab seams, 24 attached hub bands and an evenly pleated center. This light decorative rosette is not load-bearing. Record print scale, seam fit and springback in the pending physical build trial.