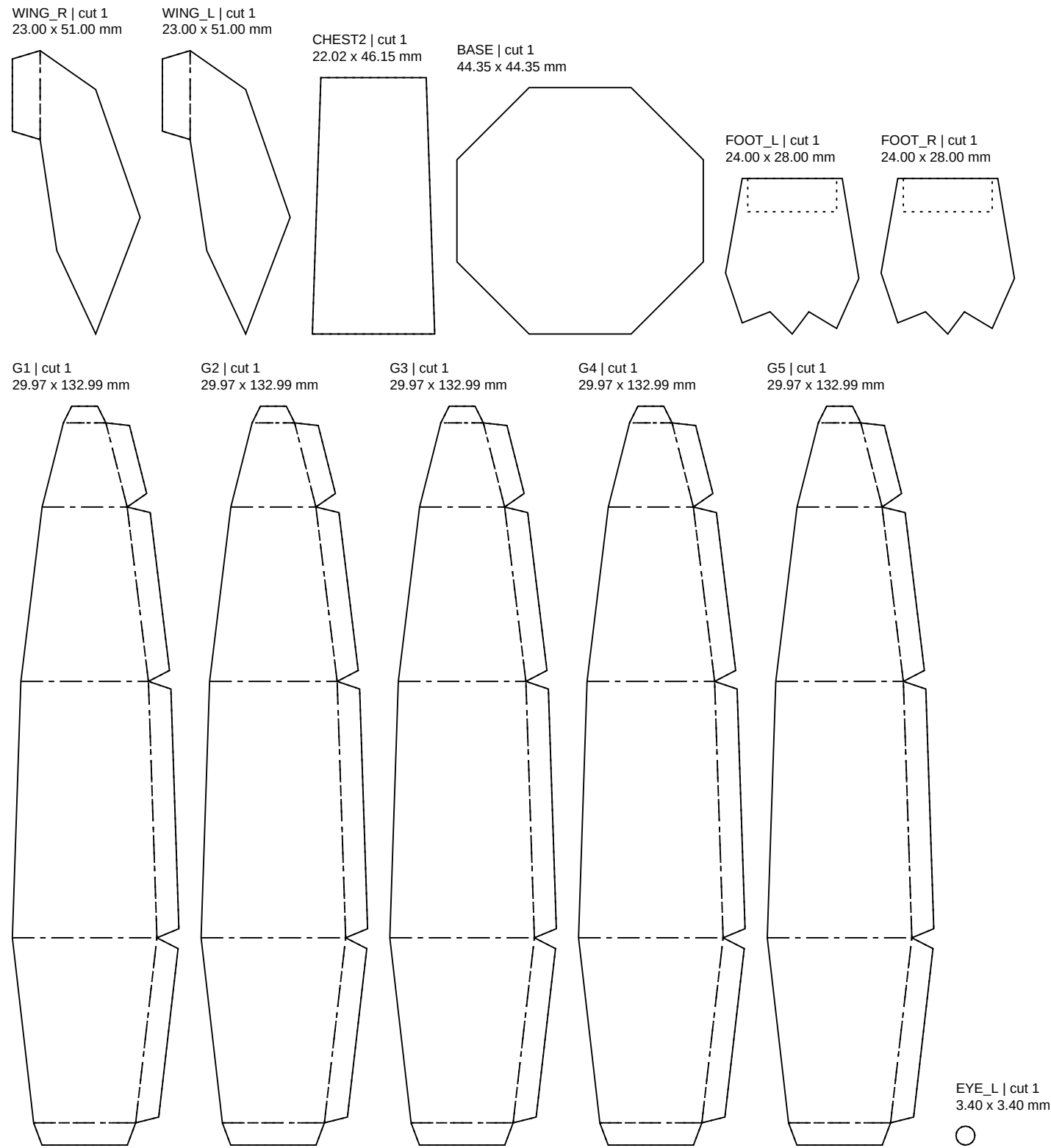
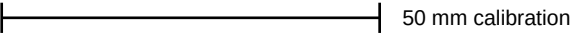


Faceted Standing Penguin

penguin / 1.0.0 / Letter / Template page 1



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



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

Faceted Standing Penguin

penguin / 1.0.0 / Letter / Template page 2

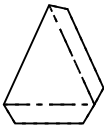
BEAK_RIGHT | cut 1
10.13 x 15.80 mm



BEAK_LEFT | cut 1
9.74 x 15.80 mm



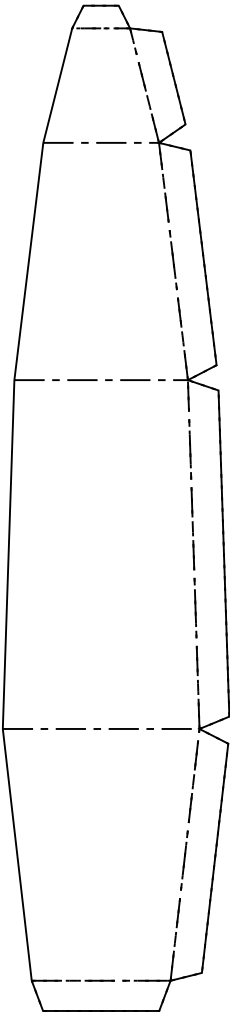
BEAK_TOP | cut 1
13.20 x 15.65 mm



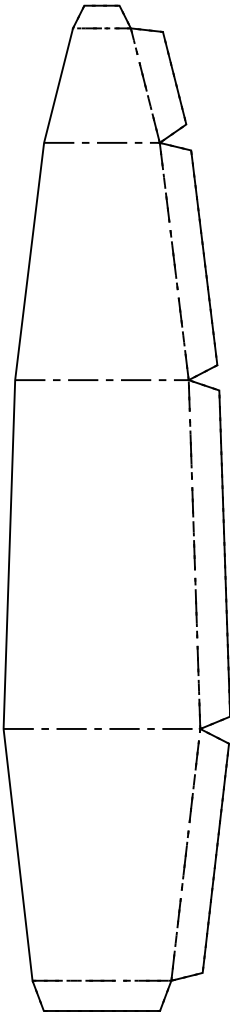
EYE_R | cut 1
3.40 x 3.40 mm



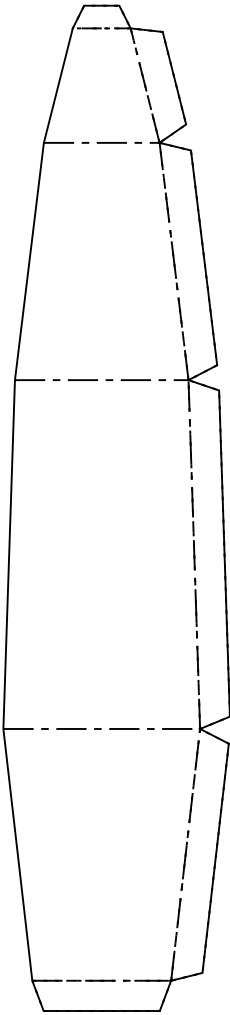
G6 | cut 1
29.97 x 132.99 mm



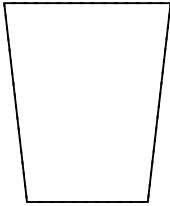
G7 | cut 1
29.97 x 132.99 mm



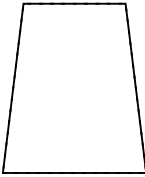
G8 | cut 1
29.97 x 132.99 mm



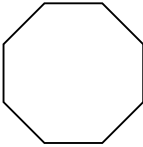
CHEST1 | cut 1
22.02 x 26.31 mm



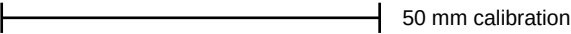
CHEST3 | cut 1
18.96 x 22.39 mm



CROWN | cut 1
18.48 x 18.48 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 Standing Penguin

penguin / 1.0.0 / Letter / Assembly instructions

Finished size: Approximately 80 x 74 x 120 mm

Materials: 180-220 gsm black card; 100-140 gsm ivory paper; 160-180 gsm orange card; PVA glue; Scissors or craft knife; Ruler and blunt scoring tool

Original polygonal paper sculpture; no external artwork.

All body facets, tabs, wings and beak triangles are exact rigid developments. No spherical stretching or unlisted supports are used.

Paper and glue thickness, springback and drying distortion are not simulated. Chest/eye/foot display offsets of 0.15-0.18 mm prevent coincident surfaces.

The broad octagonal sole and projecting feet are intended for level-table standing. Physical printing, cutting, assembly and balance verification are deferred.

Part inventory (cut each instance once):

G1: Body gore 1

G2: Body gore 2

G3: Body gore 3

G4: Body gore 4

G5: Body gore 5

G6: Body gore 6

G7: Body gore 7

G8: Body gore 8

BASE: Octagonal sole

CROWN: Crown closure

CHEST1: White chest 1

CHEST2: White chest 2

CHEST3: White chest 3

EYE_L: Ivory eye

EYE_R: Ivory eye

BEAK_TOP: Beak Top

BEAK_LEFT: Beak Left

BEAK_RIGHT: Beak Right

WING_R: Folded flipper

WING_L: Folded flipper

FOOT_L: Webbed foot

Faceted Standing Penguin

penguin / 1.0.0 / Letter / Assembly instructions continued

FOOT_R: Webbed foot

1. Cut and score [G1, G2, G3, G4, G5, G6, G7, G8, BASE, CROWN, CHEST1, CHEST2, CHEST3, EYE_L, EYE_R, BEAK_TOP, BEAK_LEFT, BEAK_RIGHT, WING_R, WING_L, FOOT_L, FOOT_R]: Print at 100 percent; the ruler must measure 50 mm. Cut all 22 pieces once. Use 180-220 gsm black card for G1-G8, BASE, CROWN and wings; 100-140 gsm ivory for chest and eyes, and 160-180 gsm orange for beak and feet. Transfer outlines and score lines to colored stock if printing without color. Score all marked folds with a blunt tool before cutting the small tabs.
2. Form eight tapered gores [G1, G2, G3, G4, G5, G6, G7, G8]: G1 is the front; G2-G8 proceed around the bird to its right. Keep the black face outside. Mountain-fold the three horizontal body creases approximately 21, 13 and 21 degrees from flat, in ascending order. Ring heights are 0, 32, 78, 108 and 120 mm; corner diameters are 48, 68, 60, 40 and 20 mm. Pre-fold the side tabs inward; adjust their angles until they lie flush under the next gore. Do not curl or stretch the facets.
3. Apply the real white chest and eyes [G1, CHEST1, CHEST2, CHEST3, EYE_L, EYE_R]: While G1 is accessible, glue CHEST1 to its lowest panel, 7 mm up the sloping panel from the bottom edge. CHEST2 fills the next panel; CHEST3 begins at the next crease and stops 9 mm below its upper edge. All three leave 2 mm black side borders. Butt the patches at the two creases without bridging them. Glue 3.4 mm eyes on the shoulder, centers 9.4 mm apart and 4.4 mm down the slope from the 108 mm crown ring. Allow five minutes to set.
4. Assemble the projecting beak [G1, BEAK_TOP, BEAK_LEFT, BEAK_RIGHT]: Join the three orange triangles on their 2 mm radial seam tabs to make a hollow triangular beak. Each tab goes inside its neighboring triangle; leave the back open. Fold the 2.5 mm back tabs outward against G1. Center its 12 mm top back edge 10 mm down the shoulder slope from the 108 mm ring; its bottom back point is another 6 mm below. Glue tabs to G1: the tip projects 13 mm perpendicular to that face. Pinch from inside G1 and let dry five minutes.
5. Join the shell [G1, G2, G3, G4, G5, G6, G7, G8]: Glue the four 4 mm right-edge tabs of G1 beneath the plain left edge of G2, aligning all ring corners exactly. Continue G2 to G3 through G8, then close G8 to G1. Work bottom-to-top at each seam and press from the still-open base/crown. The horizontal cross sections are regular octagons, with 45 degree direction changes between facets. Allow each seam five minutes to set; do not overlap the visible main panels.
6. Close the crown [CROWN]: Fold the eight 3 mm top tabs inward onto a horizontal plane. Glue the 20 mm corner-to-corner CROWN octagon onto them, matching its eight 7.65 mm edges to the top rim. Press gently through the open bottom and dry for ten minutes.
7. Attach the flippers [WING_R, WING_L]: The 16 mm hinge of each wing starts 24 mm up the 46.15 mm sloping belly panel on G3 (right) and G7 (left), centered across that panel. Glue only the 5 mm hinge tab to the side face, extending toward the front. Fold the blade back over its tab, then open it 28 degrees outward from the side plane; both tips point down and toward the rear. Hold the hinge until set. Do not glue down the long blade.
8. Make the stable sole and feet [BASE, FOOT_L, FOOT_R]: Lay BASE level. Glue the marked 16 x 6 mm heel area of each foot under its front edge. Foot centers are 24 mm apart; the straight heel edges sit 14 mm forward of the base center, toes pointing toward G1. The longest toes reach 42 mm forward of center. Keep both feet flat. Fold all eight lower body tabs inward and glue BASE beneath them, matching all eight 18.37 mm base edges. The shell rests on a 48 mm octagonal sole with projecting feet. Press on a level surface and let dry 30 minutes. Physical balance and assembly remain unverified.