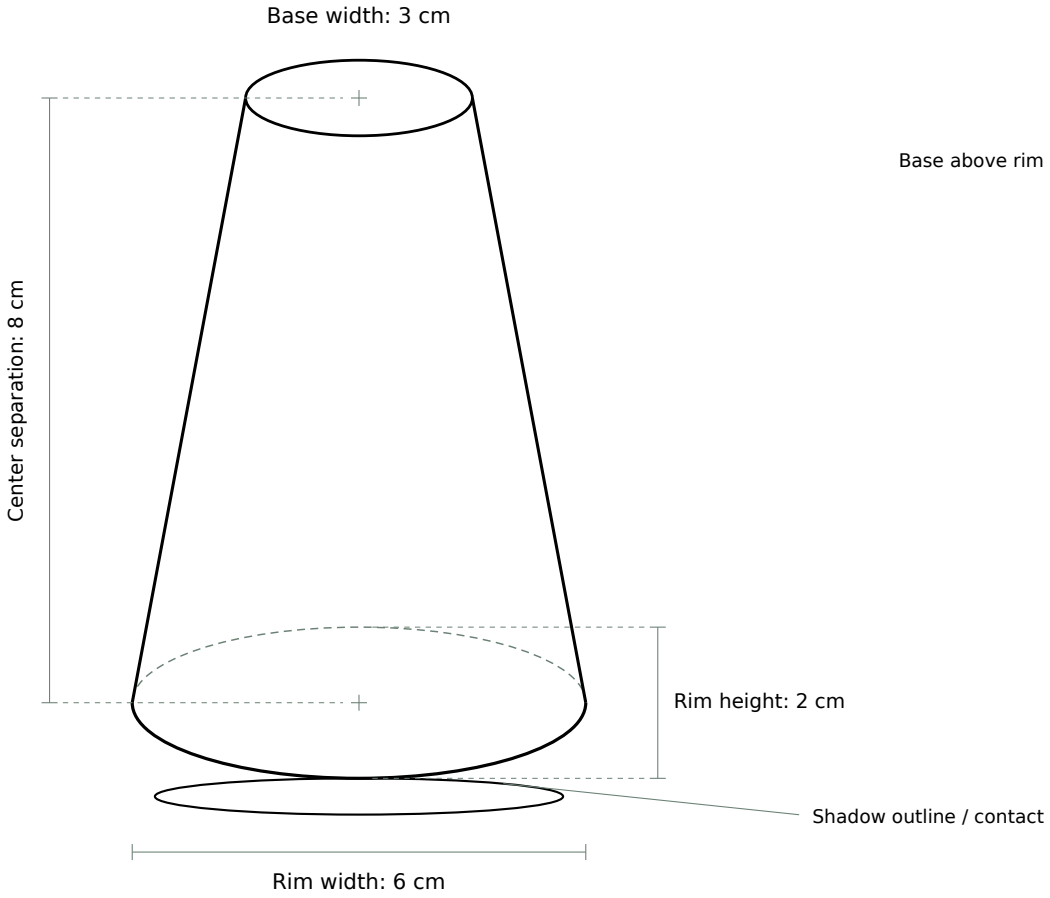
Draw an Upside-Down Cup: Orientation, Rim Ellipse, Base, and Shadow

WORKED EXAMPLE / MEASURED CONSTRUCTION

Draw an upside-down cup with a rim width of 6 cm, rim height of 2 cm, cup height of 8 cm, and base width of 3 cm. Include a shadow below the rim.

Construction view / full rim plane guide / print at 100%



Draw a vertical axis with the base center 8 cm above the rim center. This is the lesson's center-to-center cup height, not its full outside extent. Center a 6 cm by 2 cm rim ellipse on the lower point and a 3 cm by 1 cm base ellipse on the upper point. Connect corresponding left and right ends with noncrossing side lines, wider at the lower rim. Keep the full rim ellipse as a construction guide; the upper half does not show a visible interior. Draw one outlined shadow below, touching the lowest rim point. Check rim below base, upward narrower base, and shadow contact. In this example the outer ellipse-to-ellipse extent is 8 + 0.5 + 1 = 9.5 cm; the requested center separation remains 8 cm.

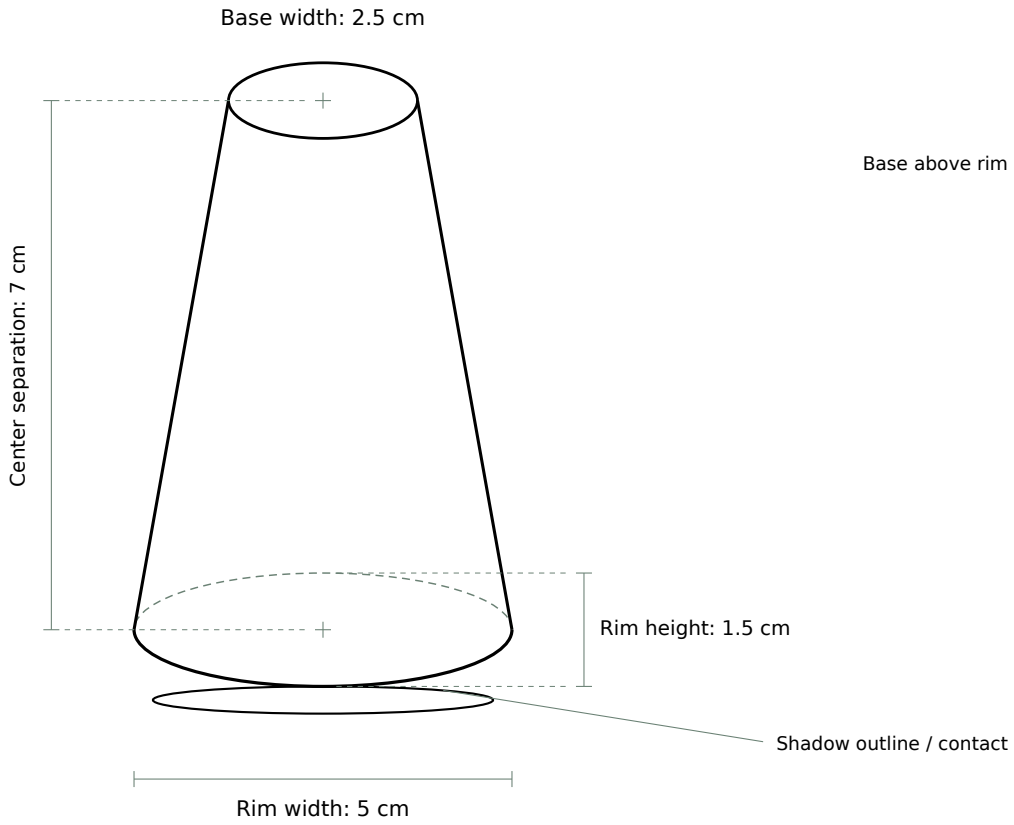
All measurements are hypothetical. Quantitative diagrams use the labelled paper centimetres at 100% print size; check printer scale separately. Cup height here is center separation. A dashed rear rim is a construction guide, not visible interior. The unfilled shadow follows this lesson's contact convention.

Draw an Upside-Down Cup: Orientation, Rim Ellipse, Base, and Shadow

EXERCISE 1 / SEPARATE WORKED ANSWER

Copy an upside-down cup reference with rim width 5 cm, rim height 1.5 cm, cup height 7 cm, and base width 2.5 cm. Mark the rim, base, and shadow.

Construction view / full rim plane guide / print at 100%



A drawing with the rim ellipse at the bottom, base at the top, and shadow below the rim. The rim ellipse is 5 cm wide and 1.5 cm tall; the base is 2.5 cm wide; the base-center to rim-center separation is 7 cm.

Why: The orientation cues are rim at bottom, base at top, shadow below. The measurements keep the base narrower than the rim and the cup taller than the rim.

Check: Measure the rim width and height, base width, and base-center to rim-center separation. Confirm the rim is at the bottom and the shadow touches the rim's lowest point.

Base-ellipse height 1 cm is an illustrative choice; it is not prescribed by task 1.

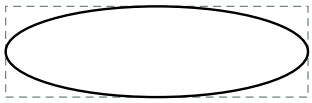
All measurements are hypothetical. Quantitative diagrams use the labelled paper centimetres at 100% print size; check printer scale separately. Cup height here is center separation. A dashed rear rim is a construction guide, not visible interior. The unfilled shadow follows this lesson's contact convention.

Draw an Upside-Down Cup: Orientation, Rim Ellipse, Base, and Shadow

EXERCISE 2 / SEPARATE WORKED ANSWER

Trace a flipped rim ellipse inside a 4 cm by 1.2 cm box, then erase the box. Add a base 2 cm wide above the ellipse and a shadow below.

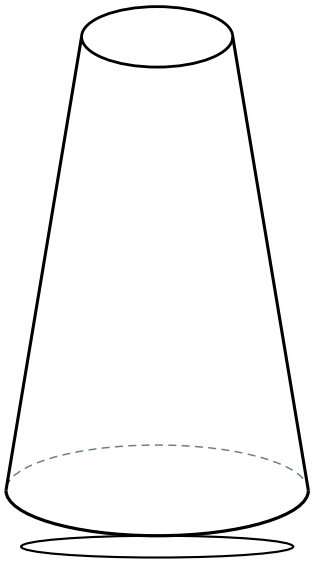
1. Trace in the box



Box 4 x 1.2 cm; ellipse touches four midpoints

Erase the rectangular guide after tracing.

2. Box erased / add base and shadow



Base width 2 cm

Center separation 6 cm and base height 0.8 cm are illustrative choices, not extra task givens.

Draw the 4 cm by 1.2 cm ellipse touching the four box midpoints, then erase the box. Put a 2 cm wide base above it and an outlined shadow below touching the lowest rim point. The task does not specify the base-to-rim center separation or base-ellipse height, so choose consistent illustrative values and label them as choices.

Why: The box guides the ellipse proportions. The base above and shadow below confirm the inverted orientation.

Check: Check that the ellipse touches the box midpoints before erasing. After erasing, confirm the base is above and the shadow is below.

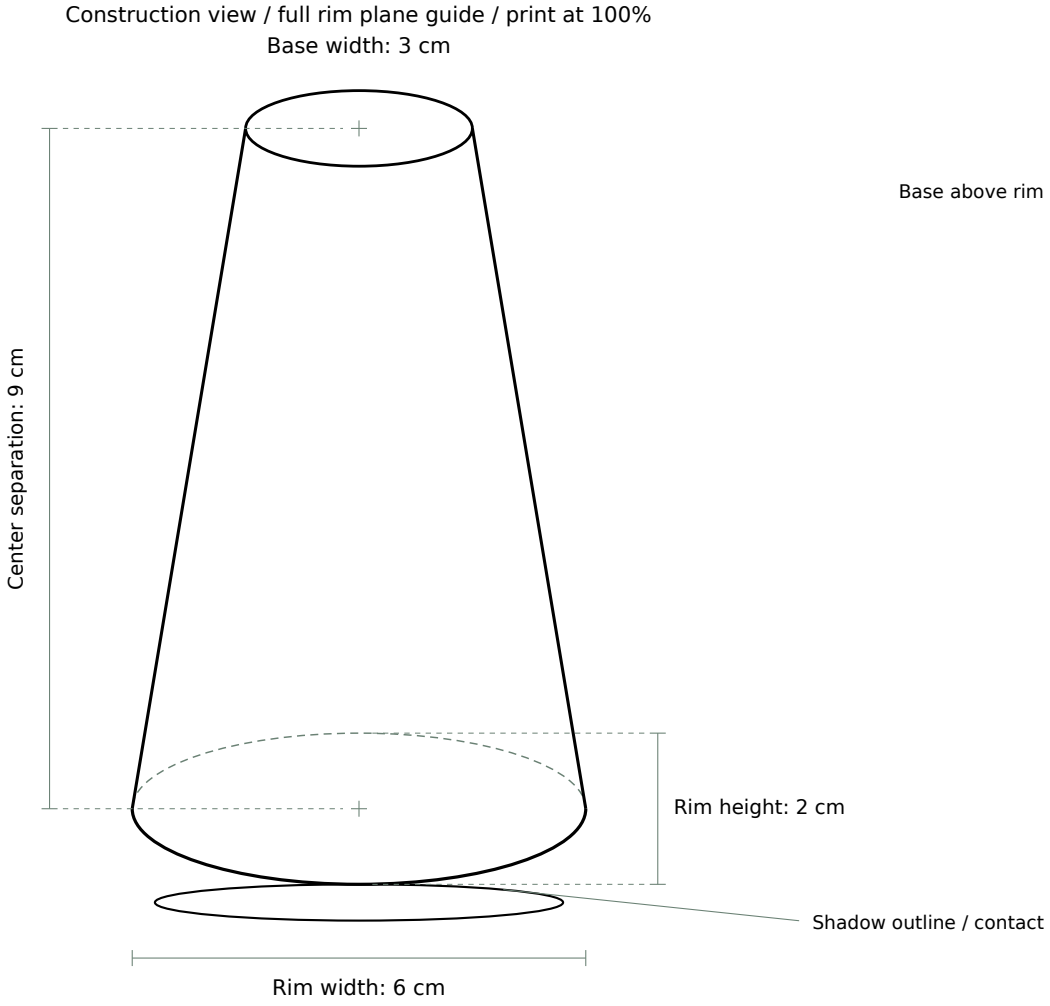
Center separation 6 cm and base height 0.8 cm are choices for this example, not task requirements.

All measurements are hypothetical. Quantitative diagrams use the labelled paper centimetres at 100% print size; check printer scale separately. Cup height here is center separation. A dashed rear rim is a construction guide, not visible interior. The unfilled shadow follows this lesson's contact convention.

Draw an Upside-Down Cup: Orientation, Rim Ellipse, Base, and Shadow

EXERCISE 3 / SEPARATE WORKED ANSWER

Draw an upside-down cup with cup height 9 cm, rim width 6 cm, rim height 2 cm, and base width 3 cm. Add a shadow that touches the rim.



A cup drawing with the rim ellipse at the bottom, base at the top, and shadow below. The rim is 6 cm wide and 2 cm tall; the base is 3 cm wide; the base-center to rim-center separation is 9 cm.

Why: The height is greater than the rim height, and the base is narrower than the rim. The shadow touches the rim's lowest point.

Check: Measure center-to-center height and widths. Confirm the base is above the rim and the shadow touches the rim.

Base-ellipse height 1 cm is illustrative; the stated height is the 9 cm center separation.

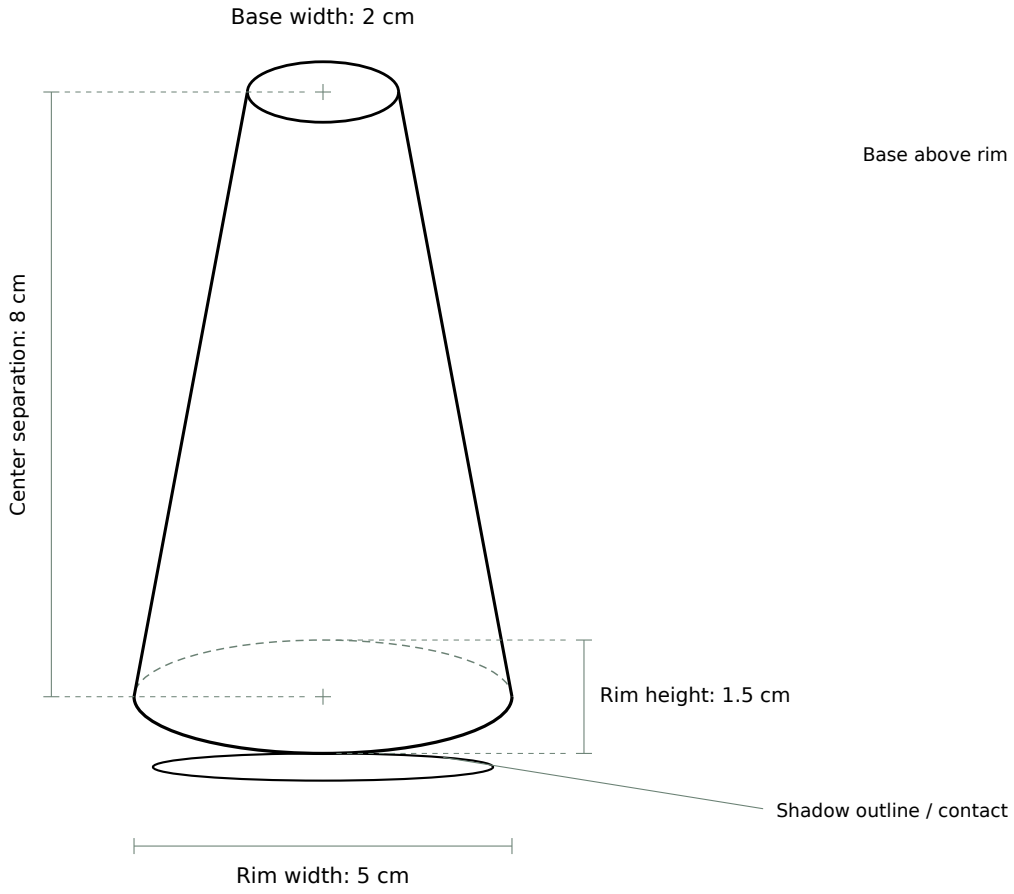
All measurements are hypothetical. Quantitative diagrams use the labelled paper centimetres at 100% print size; check printer scale separately. Cup height here is center separation. A dashed rear rim is a construction guide, not visible interior. The unfilled shadow follows this lesson's contact convention.

Draw an Upside-Down Cup: Orientation, Rim Ellipse, Base, and Shadow

EXERCISE 4 / SEPARATE WORKED ANSWER

Draw an upside-down cup from memory using a rim width of 5 cm and a base width of 2 cm. Then check orientation with three questions: rim at bottom, base at top, shadow below.

Construction view / full rim plane guide / print at 100%



A freehand drawing that satisfies all three orientation questions and uses the stated widths.

Why: Drawing from memory tests whether the orientation convention is understood without tracing.

Check: Answer the three orientation questions. Measure the rim and base widths and confirm the base is narrower.

Rim height 1.5 cm, center separation 8 cm and base height 0.8 cm are illustrative; task 4 requires only the two widths and orientation checks.

All measurements are hypothetical. Quantitative diagrams use the labelled paper centimetres at 100% print size; check printer scale separately. Cup height here is center separation. A dashed rear rim is a construction guide, not visible interior. The unfilled shadow follows this lesson's contact convention.

Draw an Upside-Down Cup: Orientation, Rim Ellipse, Base, and Shadow

RUBRIC AND REFLECTION

Use this rubric after the four practice tasks. Valid line styles and illustrative heights are accepted when they follow the explicit task values and orientation convention.

- Rim center is below the base center; the sides widen toward the lower rim. The full ellipse is a construction guide.

- Base is above the rim and is narrower than the rim.

- Shadow touches the rim's lowest point and sits below the rim.

- Side lines connect base and rim without crossing.

- Line quality is clear and consistent; alternative styles are acceptable if orientation is correct.

- Record center-to-center height, rim width and height, and base width. A difference up to 1 cm is a chosen practice allowance, not a furniture or printing standard.

- [ ] Rim below the narrower base; side lines do not cross.
- [ ] Shadow below and touching the lowest rim point, as chosen for this lesson.
- [ ] Center separation and stated widths checked; optional dimensions labelled as choices.

Why the ellipse alone is not an orientation test

The same symmetric ellipse is unchanged by a half-turn. Use the relative positions of the wider lower rim and narrower upper base, plus the side lines. In this kit the outlined shadow below the rim is a stated exercise convention, not a general rule for all lighting.

Orientation evidence I used:

Measurements I verified and how:

One adjustment I would make next time:

All measurements are hypothetical. Quantitative diagrams use the labelled paper centimetres at 100% print size; check printer scale separately. Cup height here is center separation. A dashed rear rim is a construction guide, not visible interior. The unfilled shadow follows this lesson's contact convention.