Upside-Down Horse Head Drawing: A Perceptual Orientation Exercise

Original tasks 1, 2 / complete keys

Task 1

In an inverted frame 10 cm wide and 14 cm tall, draw a horse head with these hypothetical proportions: face wedge x-height 5 pencil-widths, cheek oval x-height 3, ears x-height 1.5 each, muzzle loop x-height 1.5. Place the muzzle near the bottom and ears near the top. Describe your drawing and state one orientation check.

Answer: Frame labeled 'inverted top' with downward arrow. Face wedge from top toward bottom, wide end up, x-height 5. Cheek oval x-height 3 on one side. Two curved-triangle ears near top, x-height 1.5 each, pointing down. Muzzle loop near bottom, x-height 1.5. Eye and nostril inside cheek and muzzle. Orientation check: muzzle is lower than ears in the frame.

Reason: The proportions use one unit (pencil-widths) and the placement follows the inverted frame. The check confirms the muzzle is near the bottom, which is the key inverted-orientation feature.

Check: Measure each x-height from baseline to midline with the same pencil-width unit. Verify the muzzle loop is closer to the bottom edge than the ears are to the top edge.

Task 2

An inverted frame is 8 cm wide and 12 cm tall. Draw a horse head where the face wedge x-height is 4 pencil-widths and the cheek oval x-height is 2. The ears are x-height 1 each and sit 1 pencil-width below the top edge. The muzzle loop is x-height 1 and sits 1 pencil-width above the bottom edge. Describe the drawing and give one proportional check.

Answer: Frame labeled 'inverted top'. Face wedge wide end up, x-height 4. Cheek oval x-height 2. Ears x-height 1 each, placed 1 pencil-width below the top edge, pointing down. Muzzle loop x-height 1, placed 1 pencil-width above the bottom edge. Eye and nostril inside shapes. Proportional check: cheek oval x-height is half the face wedge x-height.

Reason: The given distances and x-heights are consistent with the frame. The proportional check uses simple arithmetic: 2 is half of 4.

Check: Confirm the ear distance from the top edge and muzzle distance from the bottom edge using the same pencil-width unit. Verify $2 = 4 \div 2$ for the cheek-to-face ratio.

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Original tasks 3, 4 / complete keys

Task 3

In an inverted frame 14 cm wide and 18 cm tall, draw a horse head with face wedge x-height 7 pencil-widths, cheek oval x-height 3.5, ears x-height 2 each, and muzzle loop x-height 2. The ears sit 2 pencil-widths below the top edge. The muzzle sits 2 pencil-widths above the bottom edge. Describe the drawing and state one line-direction check.

Answer: Frame labeled 'inverted top'. Face wedge wide end up, x-height 7. Cheek oval x-height 3.5. Ears x-height 2 each, 2 pencil-widths below top edge, pointing down. Muzzle loop x-height 2, 2 pencil-widths above bottom edge. Eye and nostril inside shapes. Line-direction check: trace the face wedge from wide end at top to narrow end at bottom without flipping it upright.

Reason: The proportions are consistent and the line-direction check addresses the main perceptual error of flipping the image mentally.

Check: Trace each major line with a finger from start to end in the inverted view. Confirm the face wedge narrows toward the bottom and the ears point downward.

Task 4

An inverted frame is 9 cm wide and 13 cm tall. Draw a horse head with face wedge x-height 6 pencil-widths, cheek oval x-height 3, ears x-height 1.5 each, and muzzle loop x-height 1.5. Place the cheek oval on the left side of the face wedge. The ears sit 1.5 pencil-widths below the top edge. The muzzle sits 1.5 pencil-widths above the bottom edge. Describe the drawing and give one consistency check for units.

Answer: Frame labeled 'inverted top'. Face wedge wide end up, x-height 6. Cheek oval on left side, x-height 3. Ears x-height 1.5 each, 1.5 pencil-widths below top edge, pointing down. Muzzle loop x-height 1.5, 1.5 pencil-widths above bottom edge. Eye and nostril inside shapes. Unit consistency check: all x-heights and distances use the same pencil-width unit.

Reason: The left-side placement is a valid alternative style. The unit check ensures measurements are comparable across features.

Check: List every measurement and confirm each uses pencil-widths. Verify the cheek oval is on the left of the face wedge and the muzzle is near the bottom.

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Source rubric / reflection

- [ ] Frame is drawn and labeled 'inverted top' with a downward arrow.
- [ ] Muzzle is placed near the bottom and ears near the top.
- [ ] Large shapes are drawn before details.
- [ ] X-height is measured from baseline to midline with one consistent unit.
- [ ] Valid alternative letter styles are accepted if orientation and proportion are consistent.
- [ ] Three orientation-check boxes are ticked after frame comparison.

Reflection: What did you check, what did you change, and what will you try next?