How to Draw a Head with a Grid: Proportion and Feature Placement

Original tasks 1, 2, 3 / complete keys

Task 1

A head is 24 cm tall. Using the convention in this lesson, calculate the distance from the crown to the eye-line, to the nose-line, and to the mouth-line. State each value in centimeters.

Answer: Eye-line: 12 cm. Nose-line: 18 cm. Mouth-line: 21 cm.

Reason: Half of 24 is 12. Three-quarters of 24 is 18. One-eighth of 24 is 3, and 18 + 3 = 21. All values are measured from the crown.

Check: Add the intervals: 12 + 6 = 18, and 18 + 3 = 21. Confirm that 21 is less than 24, so the mouth-line is above the chin line.

Task 2

A head is 18 cm wide. Using the five-part eye division, calculate the width of each part and state the positions of the two eye centers measured from the left edge of the head.

Answer: Each part is 3.6 cm. The left eye center is 5.4 cm from the left edge, and the right eye center is 12.6 cm from the left edge.

Reason: 18 divided by 5 equals 3.6. The parts are margin 3.6, eye 3.6, gap 3.6, eye 3.6, margin 3.6. The left eye center is at the middle of the first eye part: 3.6 + 1.8 = 5.4 cm. The right eye center is at 3.6 + 3.6 + 3.6 + 1.8 = 12.6 cm.

Check: Check symmetry: 18 minus 12.6 equals 5.4, so the right eye center is the same distance from the right edge as the left eye center is from the left edge.

Task 3

A student draws a head 16 squares tall on a grid. The eye-line is drawn at square 7 from the top, the nose-line at square 11, and the mouth-line at square 13. Using the lesson convention, state whether each line is correct, and give the correct square number if it is not.

Answer: Eye-line should be square 8, not 7. Nose-line should be square 12, not 11. Mouth-line should be square 14, not 13.

Reason: Half of 16 is 8. Three-quarters of 16 is 12. One-eighth of 16 is 2, and 12 + 2 = 14. Each drawn line is one square too high.

Check: Count from the top: 8, 12, and 14. Confirm that 14 is less than 16, so the mouth-line is above the chin line.

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Original tasks 4 / complete keys

Task 4

A head is 30 cm tall and 20 cm wide. Calculate the eye-line, nose-line, and mouth-line distances from the crown, and the five-part eye division width. Then describe where the nose tip and mouth center are placed relative to the center line.

Answer: Eye-line: 15 cm. Nose-line: 22.5 cm. Mouth-line: 26.25 cm. Each of the five width parts is 4 cm. The nose tip is on the center line at 22.5 cm from the crown. The mouth center is on the center line at 26.25 cm from the crown.

Reason: Half of 30 is 15. Three-quarters of 30 is 22.5. One-eighth of 30 is 3.75, and 22.5 + 3.75 = 26.25. 20 divided by 5 equals 4. The nose tip and mouth center both sit on the vertical center line because they are centered features in a front view.

Check: Add the intervals: 15 + 7.5 = 22.5, and 22.5 + 3.75 = 26.25. Confirm that 26.25 is less than 30. Check the width parts: 5 times 4 equals 20.

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Source rubric / reflection

- [ ] Guide lines for crown, chin, eye-line, nose-line, and mouth-line are drawn and labeled.
- [ ] Eye-line is at half the head height, nose-line at three-quarters, and mouth-line one-eighth below the nose-line, or a stated alternative convention is applied consistently.
- [ ] Eyes are centered on the eye-line and balanced around the vertical center line.
- [ ] Nose tip is on the nose-line and center line.
- [ ] Mouth center is on the mouth-line and center line.
- [ ] Feature placement is checkable by counting grid squares or by simple arithmetic.
- [ ] Any deviation from the stated convention is recorded with a reason.
- [ ] Valid alternatives are accepted if they are consistent and checkable.

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