Draw Animation Eyes: Oversized Iris and Three-Frame Blink

Original tasks 1, 2, 3 / complete keys

Task 1

An eye has height 24 mm. What is the valid iris diameter range using the 60 to 90 percent rule?

Answer: 14.4 mm to 21.6 mm.

Reason: Multiply 24 mm by 0.6 to get 14.4 mm and by 0.9 to get 21.6 mm. Any diameter in that range is valid.

Check: Recompute 24 times 0.6 and 24 times 0.9; confirm the lower value is less than the upper value.

Task 2

A learner draws an open frame with the top lid at 18 mm above baseline, a half-closed frame with the top lid at 9 mm, and a closed frame with the top lid at 0 mm. Eye height is 18 mm. Is the half-closed lid position correct?

Answer: Yes, 9 mm is half of 18 mm.

Reason: Half-closed means the top lid is about half the eye height above the baseline. 18 divided by 2 equals 9.

Check: Divide eye height by 2 and compare to the half-closed lid measurement.

Task 3

An iris has diameter 14 mm and the highlight dot is 2 mm wide. The dot center is 6 mm from the iris center. Is the dot fully inside the iris?

Answer: No. The dot extends beyond the iris edge.

Reason: Iris radius is 7 mm. A 2 mm dot centered 6 mm from the iris center reaches 7 mm from the center, so it touches the edge and is not fully inside.

Check: Add half the dot width to the center offset: 6 plus 1 equals 7 mm, which equals the iris radius, so the dot is not fully inside.

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Original tasks 4 / complete keys

Task 4

A three-frame strip uses iris diameters of 15 mm, 15 mm, and 12 mm with eye height 20 mm. Which frame breaks the consistency rule and what is the valid range?

Answer: The third frame breaks consistency. Valid range is 12 mm to 18 mm, so 12 mm is at the lower limit but the size changed from 15 mm.

Reason: The iris should stay the same size across frames. 12 mm is within the valid range, but changing from 15 mm to 12 mm makes the blink read as a different eye.

Check: Compare all three diameters; they should match. Then check the shared value against 0.6 times 20 and 0.9 times 20.

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Source rubric / reflection

- [ ] Iris diameter is between 60 and 90 percent of eye height in all frames.
- [ ] Iris position is consistent across the three frames.
- [ ] Highlight dot is fully inside the iris in open and half-closed frames.
- [ ] Open frame shows top lid at midline and full iris.
- [ ] Half-closed frame shows top lid near half height and upper iris covered.
- [ ] Closed frame shows top lid at baseline and iris hidden.
- [ ] Labels or clear ordering make the three frames readable.
- [ ] Valid alternatives: any lid curve shape, any highlight position inside the iris, any iris size within the stated range.

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