Drawing Sunglasses: Frame, Lens, and Reflection Construction

Original tasks 1, 2, 3 / complete keys

Task 1

A sketch has a frame width of 90 mm and a bridge gap of 8 mm. Each lens is 32 mm wide. Check whether the lens widths plus the bridge gap equal the frame width.

Answer: No. Two lenses at 32 mm each plus an 8 mm bridge give 72 mm, which is 18 mm less than the 90 mm frame width.

Reason: Add the two lens widths and the bridge gap, then compare the total to the frame width. The difference shows the frame has extra width that must be accounted for, such as outer rim margins.

Check: Re-add 32 plus 32 plus 8 and compare with 90. If the total is less, measure the outer margins on both sides to confirm they are equal.

Task 2

On a drawing, the left lens highlight is near the upper outer corner and the right lens highlight is near the lower inner corner. State the correction needed under the lesson convention.

Answer: Move the right lens highlight to its upper outer corner so both lenses use the same relative placement.

Reason: The convention requires consistent reflection placement on both lenses so the pair reads as one object. Matching the relative position corrects the mismatch.

Check: Compare the highlight position on each lens by measuring from the top rim and outer edge. Both should be near the upper outer corner.

Task 3

A lens is 40 mm tall and the frame rim adds a 3 mm margin above and below. What is the total height of the frame at that lens?

Answer: 46 mm.

Reason: Add the lens height and both margins: 40 plus 3 plus 3 equals 46 mm.

Check: Measure the lens height and both margins separately, then add them. The sum should match the measured frame height at that point.

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Original tasks 4 / complete keys

Task 4

A student shades a lens solid black and then cannot see the broad highlight. Describe the fix and the check.

Answer: Lighten the tint by erasing or shading more lightly, then restore the broad highlight by leaving that area white or erasing it back. Check that the highlight is the lightest area on the lens.

Reason: The convention requires the broad highlight to remain visible as the lightest area. Solid black removes the contrast needed for a glass-like reflection.

Check: Compare the highlight area with the rest of the lens. The highlight should be noticeably lighter, and the tint should still read as even.

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Source rubric / reflection

- [ ] Frame is continuous and symmetrical within a few millimeters.
- [ ] Lenses are equal in size and sit inside the rims with an even margin.
- [ ] Tint is even and does not obscure the highlight.
- [ ] Each lens has one broad highlight and one soft secondary reflection placed consistently.
- [ ] Temple arms match in length and angle.
- [ ] Labels, if used, are legible; handwriting style is not graded.

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