Two-Cup Water Drawing: Rim Ellipses, Levels, Shadows

Original tasks 1, 2 / complete keys

Task 1

Cup A is nearer and one-quarter full. Cup B is farther and three-quarters full. Light comes from the right. Describe the rim ellipses, water levels, and shadows for both cups.

Answer: Cup A has the larger rim ellipse and its water ellipse is low, near the bottom quarter. Cup B has a smaller rim ellipse and its water ellipse is higher, near the top quarter. Both shadows extend to the left from the cup bases, with Cup A's shadow slightly larger.

Reason: Nearer cup means larger rim ellipse. Fuller cup means water ellipse closer to the rim. Light from the right means shadows point left. The comparison is consistent because size, water height, and shadow direction all follow the stated conditions.

Check: Check that Cup A's rim ellipse is larger, Cup B's water ellipse is closer to its rim, and both shadows point left.

Task 2

Two cups are the same distance from the viewer. Cup A is empty. Cup B is half full. Light comes from the front. Describe the rim ellipses, water levels, and shadows.

Answer: Both cups have similar rim ellipses because they are the same distance. Cup A has no water ellipse. Cup B has a water ellipse about halfway down, parallel to its rim. Both shadows extend backward from the cup bases, away from the front light.

Reason: Same distance means similar rim ellipse sizes. Empty cup has no water level. Half-full cup has a water ellipse at mid-height. Front light makes shadows point backward. The comparison is clear because the water presence and shadow direction are consistent.

Check: Check that rim ellipses are similar in size, Cup A has no water ellipse, Cup B's water ellipse is at mid-height, and both shadows point backward.

Two-Cup Water Drawing: Rim Ellipses, Levels, Shadows

Original tasks 3, 4 / complete keys

Task 3

Cup A is farther and nearly full. Cup B is nearer and one-third full. Light comes from the left. Describe the rim ellipses, water levels, and shadows.

Answer: Cup B has the larger rim ellipse because it is nearer. Cup A has a smaller rim ellipse and its water ellipse is close to its rim. Cup B's water ellipse is lower, about one-third down. Both shadows extend to the right, with Cup B's shadow slightly larger.

Reason: Nearer cup B gets the larger rim ellipse. Fuller cup A gets the water ellipse closer to its rim. Left light makes shadows point right. The comparison is consistent because the nearer cup is larger and the fuller cup's water is higher.

Check: Check that Cup B's rim ellipse is larger, Cup A's water ellipse is closer to its rim, and both shadows point right.

Task 4

Two cups sit side by side. Cup A is nearer and two-thirds full. Cup B is farther and one-third full. Light comes from the back. Describe the rim ellipses, water levels, and shadows.

Answer: Cup A has the larger rim ellipse and its water ellipse is about two-thirds up from the bottom. Cup B has a smaller rim ellipse and its water ellipse is about one-third up. Both shadows extend forward from the cup bases, away from the back light, with Cup A's shadow slightly larger.

Reason: Nearer cup A gets the larger rim ellipse. Fuller cup A gets the water ellipse closer to the rim. Back light makes shadows point forward. The comparison is clear because size, water height, and shadow direction are all consistent with the stated conditions.

Check: Check that Cup A's rim ellipse is larger, Cup A's water ellipse is higher than Cup B's, and both shadows point forward.

Two-Cup Water Drawing: Rim Ellipses, Levels, Shadows

Source rubric / reflection

- [ ] Rim ellipses follow the convention: back rim highest, front rim lowest, wider than tall.
- [ ] The nearer cup has a visibly larger rim ellipse than the farther cup.
- [ ] Water levels are drawn as ellipses parallel to the rims, not as straight horizontal lines.
- [ ] The fuller cup's water ellipse is closer to its rim than the emptier cup's.
- [ ] Both shadows start at the cup bases and extend away from one stated light direction.
- [ ] The two-cup comparison is clear at a glance without reading labels.
- [ ] Valid alternatives in cup shape, water amount, and shadow length are accepted if comparisons remain consistent.

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