Draw an American Football: Oval, Seams, Laces, and Shading

Original tasks 1, 2, 3 / complete keys

Task 1

Draw a football with a long axis of 10 cm and a short axis of 6 cm, untilted. Use four laces and a light source from the top. Add a cast shadow.

Answer: A smooth oval 10 cm by 6 cm, with two long curved seams and two short cross seams inside the outline. Four evenly spaced laces centered on the long axis. Shading darker at the bottom, with a cast shadow below the football.

Reason: The axes are measured from the center, so the oval is balanced. The lace row is centered and spaced evenly. The light from the top means the bottom is darker and the shadow falls below.

Check: Measure the long and short axes from the center; count four laces and check equal gaps; squint to confirm the bottom is darker and the shadow is below.

Task 2

Draw a football tilted 20 degrees with a long axis of 12 cm and a short axis of 7 cm. Use five laces and a light source from the left. Add a cast shadow.

Answer: A smooth oval 12 cm by 7 cm tilted 20 degrees. Curved seams inside the outline, five centered laces, shading darker on the right, and a cast shadow to the right.

Reason: The tilt is applied to the whole oval without distorting it. The light from the left makes the right side darker, so the shadow falls to the right.

Check: Check that the oval is not distorted by the tilt; measure lace spacing; confirm the right side is darker and the shadow is on the right.

Task 3

Draw a football with a long axis of 9 cm and a short axis of 5.5 cm, tilted 10 degrees. Use three laces and a light source from the upper right. Add a cast shadow.

Answer: A smooth oval 9 cm by 5.5 cm tilted 10 degrees. Curved seams, three centered laces, shading darker on the lower left, and a cast shadow to the lower left.

Reason: Three laces are acceptable if evenly spaced and centered. The light from the upper right makes the lower left darker, so the shadow falls to the lower left.

Check: Measure the axes, count three laces with equal gaps, and squint to confirm the lower left is darker with the shadow on that side.

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Original tasks 4 / complete keys

Task 4

Draw a football with a long axis of 11 cm and a short axis of 6.5 cm, tilted 25 degrees. Use a double-line seam convention for all seams, five laces, and a light source from the lower left. Add a cast shadow.

Answer: A smooth oval 11 cm by 6.5 cm tilted 25 degrees. Every seam is drawn as a pair of parallel curved lines with an even gap: two long double-line seams flanking the long axis and two short double-line cross seams curving toward the center near the ends. Five evenly spaced laces sit in a centered bed between the long seams. Shading is darker on the upper right, and a soft cast shadow lies to the upper right, offset from the outline.

Reason: The double-line convention must be applied to every seam, not just some, so the drawing reads as one consistent style. The light from the lower left makes the upper right darker, so the cast shadow falls to the upper right. The tilt is applied to the whole oval without distorting its proportions.

Check: Measure the long and short axes from the center and confirm the oval is smooth and not distorted by the tilt. Check that each seam is a double line with an even gap and that no seam crosses another unintentionally. Count five laces with equal gaps centered between the long seams. Squint to confirm the upper right is darker and the cast shadow is on that side.

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Source rubric / reflection

- [ ] Oval outline is smooth, closed, and clearly longer than wide; long and short axes are balanced.
- [ ] Two long seams and two short cross seams are curved, inside the outline, and follow a consistent single-line or double-line convention.
- [ ] Lace row is centered on the long axis, between the long seams, with even spacing and a countable number of laces.
- [ ] Shading shows a clear light direction with darker shading on the opposite side; lace row remains readable.
- [ ] Cast shadow is present, separate from the outline, and offset away from the light direction.
- [ ] Valid alternatives are accepted: tilt angle, lace count, and seam style may vary if consistent and checkable.

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