Draw a Fruit Bowl: Rim Ellipse and Fruit Arrangement

Original tasks 1, 2 / independent work

Task 1

Bowl box W = 8 cm, H = 5 cm, R = 2 cm. Two fruit circles have diameters 3 cm and 2 cm. Their centers are 3 cm apart. Is the spacing valid by the half-sum rule? Show the arithmetic.

Task 2

A rim ellipse has major axis 12 cm and minor axis 3 cm. A fruit center is 6.5 cm from the left edge along the major axis and 1.6 cm above the midline. Is the center inside the ellipse? Use the ellipse equation with semi-axes a = 6 cm and b = 1.5 cm.

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Original tasks 3, 4 / independent work

Task 3

Three fruit diameters are 4 cm, 3 cm, and 2 cm. The bowl width W is 10 cm. Does the sum of diameters exceed W? If so, by how much?

Task 4

A bowl box is W = 9 cm and H = 6 cm. Choose R = 2 cm. A fruit circle of diameter 3 cm has its center 1.5 cm above the midline. Does the fruit outline cross the rim ellipse? Is the placement valid under the center-inside rule? Explain using the vertical semi-axis b = 1 cm.