Drawing a Mirror Reflection: Placing the Reflected Object Correctly

Ordinary topic reference / separately checked pixels



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Original worked example / unchanged complete key

Prompt: A vertical mirror line is drawn. A small box has its left edge 2 cm in front of the mirror and its right edge 6 cm in front. The box top is 4 cm above the baseline. Place the reflected box edges and state the distances behind the mirror.

Answer: The reflected left edge is 2 cm behind the mirror, and the reflected right edge is 6 cm behind the mirror. The reflected top stays 4 cm above the baseline. The reflected box is reversed left-right: the original left edge becomes the reflected right edge at 2 cm behind, and the original right edge becomes the reflected left edge at 6 cm behind.

Reason: Each point projects straight through the mirror line at the same perpendicular distance. Left-right order reverses, but vertical height does not change.

Check: Measure from the mirror line to each reflected edge. The reflected left edge should be 2 cm behind and the reflected right edge 6 cm behind. The sum of original and reflected distances for the left edge is 2 + 2 = 4 cm, and for the right edge is 6 + 6 = 12 cm. Re-measure with one unit.