Draw 315° in standard position. The terminal side is in the fourth quadrant and the reference angle is 45°. Use the $45^\circ - 45^\circ - 90^\circ$ triangle to find the value of this function at the reference angle:

$$\cos 45^\circ = \frac{1}{\sqrt{2}} = \frac{1}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

Use the signs of *x* and *y* in the fourth quadrant to determine the sign of cosine:

$$\cos 315^\circ = \frac{x}{1} = \frac{(+)}{(+)} = (+)$$

So: $\cos 315^\circ = \frac{\sqrt{2}}{2}$