



A graph of the function $y = \frac{1}{\sqrt{16-x^2}}$ is shown. The x-axis and y-axis are labeled. The curve starts at $x=0$ and increases as x increases. A vertical red line is drawn at $x=2$, extending from the x-axis to the curve. The area under the curve from $x=0$ to $x=2$ is shaded in light blue.

$$y = \frac{1}{\sqrt{16-x^2}}$$

$$x = 2$$