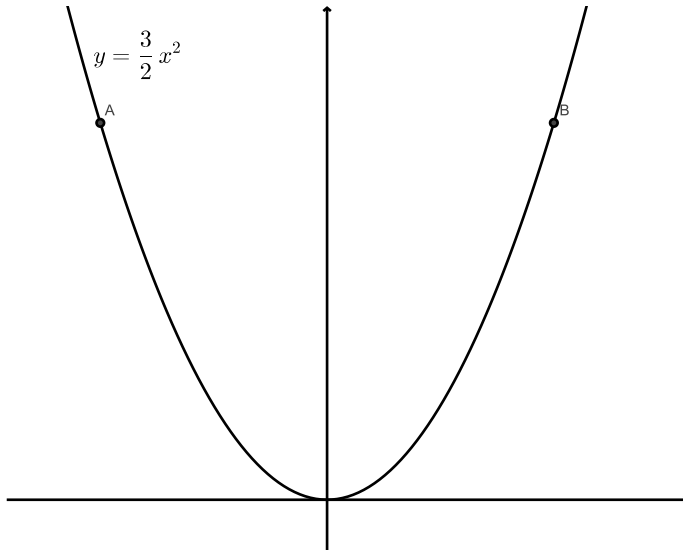1. Find the length of the curve on the graph of $y = 1 + 6x^{\frac{3}{2}}$ between $x = 0$ and $x = 1$.

2. Find the length of the curve on the graph of $y = \ln(\cos x)$ between $x = 0$ and $x = \frac{\pi}{3}$.

3. Find the length of the curve on the graph of $y = 2(x - 1)^{\frac{3}{2}}$ between $x = 1$ and $x = 2$.

4. The points A and B are equidistant from the y-axis. Find the points A and B below so that the area under the curve between A and B is 8.

$$y = \frac{3}{2}x^2$$

5. Find the point D below so that the length of the curve between C and D is $\frac{3}{2}$.

$$y = (4 - x^{\frac{2}{3}})^{\frac{3}{2}}$$