A three-dimensional object is created by rotating the area between the curves \( y = x^{3/2} \) and \( y = x^4 \) about the \( y \)-axis as shown.

1. Axis of integration: _____________

2. Find the volume of a typical slice. Use the blank space below to
   
   (a) Draw a typical slice and label its dimensions with appropriate arrows.
   
   (b) Draw the \( x-y \) cross section, the corresponding slice and label its dimensions. Labeling must be consistent.
   
   (c) Find the volume of the typical slice in terms of the variable of integration.

\[ \text{_________} = \text{_______________} \]