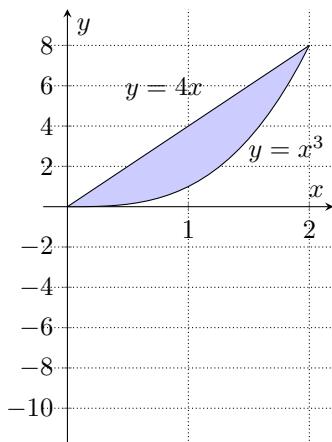


The Revolution is On!

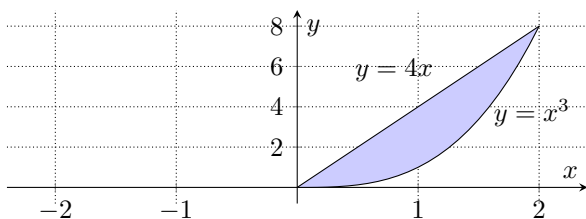
Consider the region bounded by $y = 4x$ and $y = x^3$. In each problem below, set up (but do not evaluate) an integral to compute the volume of the solid obtained by rotating this region about the given line. Make sure you integrate with respect to the indicated variable, which means you'll have to choose whether to use **cylindrical shells** or **cross sections**.

On each diagram, add a sketch of a generic cross section or cylindrical shell. This can be done onscreen with the Zoom annotation tools!

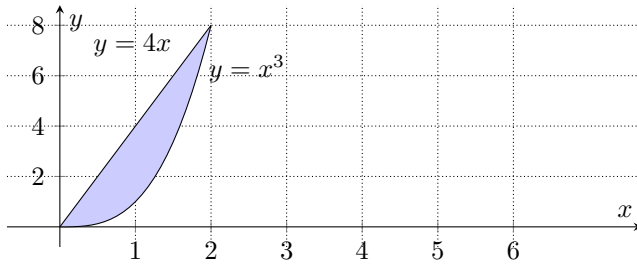
1. The line $y = -1$; with respect to x .



2. The y -axis; with respect to y .



3. The line $x = 3$; with respect to x .



4. The line $x = 3$; with respect to y .

