

# MATH 111-002 200630 Quiz 6

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Please answer both of the following questions. The quiz is 20 minutes long and is out of 20. You can use the back of the sheet for rough work.

1. Using the disk method, find the volume of the solid of revolution obtained by rotating the region bounded by  $y = x^{2/3}$ ,  $x = 8$ , and  $y = 0$  about the  $x$ -axis. Sketch the region, a typical area element, and a typical disk.

2. Using the method of your choice (disk/washer or shell), find the volume of the solid of revolution obtained by rotating the region bounded by  $y = \sin x$ ,  $y = 0$ ,  $0 \leq x \leq \pi$  about the  $y$ -axis.