Practice worksheet | Integration techniques and applications

Volumes of revolution about either coordinate axis

Name: _____ Date: _____

6 questions | 12 marks

1. Rotate 0<=x<=1, 0<=y<=x squared about the x axis. [2 marks]

2. Rotate 0<=x<=sqrt(2), x squared<=y<=2 about the x axis. [2 marks]

3. Rotate 0<=y<=3, 0<=x<=y about the y axis. [2 marks]

4. Rotate 1<=x<=2, 1<=y<=x about the x axis. [2 marks]

5. Rotate the rectangle 1<=x<=2, 0<=y<=3 about the y axis. [2 marks]

6. The region under y=kx from x=0 to 1 is rotated about the x axis, with k>0. If volume is 12pi, find k. [2 marks]