

Math 152 Quiz #9
March 10, 2009

Name: _____

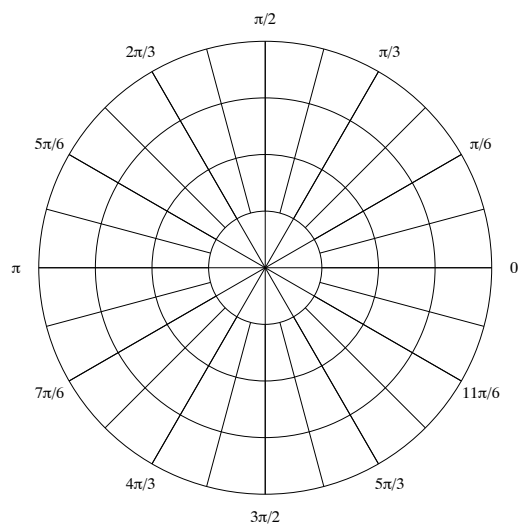
Show all work and simplify your answers as much as possible.

1. (4 pts.) Evaluate $\int_1^3 \frac{4x}{\sqrt[3]{x^2-1}} dx$. State whether it is convergent or divergent.

2. (3 pts.) Find the arclength of the curve $y = 4(x+1)^{3/2}$ from the points $(-1, 0)$ to $(0, 4)$.

3. (3 pts.) Sketch a region consisting of points whose polar coordinates satisfy the following:

$$r < 1 \quad \text{and} \quad \frac{\pi}{2} \leq \theta \leq \pi$$



(Put an r -scale on your axes.)