## Quiz $1 \quad$ Calculus $2 \quad$ 3/4/2016

Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. Set up an integral and evaluate it to find the arc length of $y=x^{3 / 2}$ on the interval [1,2].
2. Find $\bar{x}$, the $x$-coordinate of the center of mass, for the region lying underneath the graph of $f(x)=\sqrt{x}$ on the interval $[1,4]$.
3. Find the Taylor polynomial $\mathrm{T}_{3}$ centered at $x=2$ for $f(x)=\frac{1}{1+x}$.
