KFUPM	Term 162	Date: 28/3/2017
Mathematics & Statistics	MATH 102	Duration: 25 minutes
	Quiz# 4	
Name:	ID #:	Section:

Q1. Use the method of cylindrical shells to find the volume of the solid obtained by rotating the region bounded by the given curves around the x-axis.

$$y = x^3\,, \qquad y = 8, \qquad x = 0$$

Q2. Find the average value of the function $f(x) = x\ tan^{-1}x$ on the interval [-1, 1].

Q3. Evaluate the following integral

$$\int sin^{3/2}(x)cos^3(x)dx$$

Q4. Evaluate the integral

$$\int_0^t e^s \sin(t-s)\, ds$$