King Fahd University of Petroleum and Minerals
Departement of Mathematics & Statistics
Math101.14
Semester 111
Quiz (2)

Name:
ID #: **Serial #:**

---

1. A particle moves along a line with acceleration $a(t) = 2t - 8$ and initial velocity $v(0) = 15$ find:

   (a) the velocity as a function of ***t***.

   (b) the distance traveled during $0 \le t \le 5$

2. Evaluate:

$$\int_{-4}^{0} (2 + \sqrt{16 - x^2})\, dx$$

3. Evaluate:

$$\int_0^4 \frac{t}{\sqrt{1+2t}}\,dt$$

4. Find the area enclosed by:

$$x = 2y^2 \text{ and } x = 4 + y^2$$

5. (Bonus) Evaluate:

$$\int_1^2 \frac{1}{x^2}\sqrt{\frac{x-1}{x}}\,dx$$

Good luck
Khaled Al-Anezy