MATH 230 QUIZ 1 NAME:

1. Find the general anti-derivative $F(x)$ to the following functions

   (a) $f(x) = -8x + 2 - \dfrac{7}{x^5}$ $F(x) =$ _____

   (b) $f(\theta) = 3\sec^2(\theta) - 4\sec(\theta)\tan(\theta)$ $F(\theta) =$ _____

2. Evaluate the definite integrals.

   (a) $\displaystyle\int_{-2}^{3} x^3 - 3x + 7\, dx$ $=$ _____

3. Evaluate the following integrals using u-substitution.

(a) $\displaystyle\int \frac{\sin(\sqrt{x})}{\sqrt{x}}dx$ $= \_\_\_\_\_$

4. Evaluate the following integrals.

(a) $\displaystyle\int_2^3 3x\sqrt{x^2-4}\,d\theta$ $= \_\_\_\_\_$