

**Instructions:** *Include all relevant work to get full credit. Write your solutions using proper notations. Encircle your final answers.*

**Quiz #15**

1. Find the general antiderivative of the following functions:

a.  $f(x) = 8x^3 - x + 3$  [2]

b.  $f(\theta) = \sec^2(\theta) - \sec(\theta) \tan(\theta)$  [2]

c.  $f(t) = t^2(7\sqrt{t} - \frac{2}{t^3})$  [2]

2. Find  $f(x)$  if  $f'(x) = \frac{x+1}{\sqrt{x}}$  and  $f(1) = 5$ . [4]