

## MATH 141: QUIZ 8 SECTIONS 4.8-5.2

ANN CLIFTON  
UNIVERSITY OF SOUTH CAROLINA

Name: \_\_\_\_\_

**No phone or calculator.** You must show all work to receive full credit. Be sure to make reasonable simplifications.

1. **(5 points)** Find the indefinite integral:

$$\int \left( \cos x + x^2 - 3x + \frac{2}{\sqrt{x}} \right) dx$$

2. **(5 points)**

(a) Write the following sum in closed form (using sigma notation):

$$\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16}$$

(b) Write the following in open form (without the sigma) and evaluate:

$$\sum_{k=1}^3 (-1)^k k^2$$