

Math 151 - Quiz 10

November 11, 2015

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (4 points) Solve for x .

(a) $4^{2x-5} = 8^{x/2}$

(b) $3^{x^2+4x} = 81^{-1}$

2. (2 points) The half-life of radium is approximately 1600 years. Find a so that $A(t) = A_0 a^t$ describes the amount of radium after t years, where A_0 is the initial amount.

3. (4 points) \$2500 is deposited into an account at an interest rate of 5.5% per year.
- (a) Find the function of the form $A(t) = A_0 a^t$ that describes the amount of money in the account after t years.

(b) How much is in the account after 20 years?

(c) How much is in the account after 60 years?