

MEDU 2010  
Fall 2016  
Professor K. Poirier  
WeBWorK Set for Homework #11

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

Date: \_\_\_\_\_

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Show all your work to answer the questions below. Show each step as you would if you were instructing a student. Aids are not permitted.

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1. Solve:

$$\sqrt{a + 11} = a - 1$$

2. Find all solutions in the interval  $[0, 2\pi]$ . Leave your answer in radians.

$$\sin^2(x) = 3 \cos^2(x)$$

3. Find the coordinates of the minimum of  $f(x) = (x^2 + 2x + 1)e^{-x}$  on the interval  $[0, 2]$ .

4. Evaluate the integral.

*Hint: This integral is easy to evaluate if you sketch the graph of the function first.*

$$\int_0^{10} \sqrt{25 - (x - 5)^2} dx$$

5. Solve:

$$\log_2(8x) - \log_2(1 + \sqrt{x}) = 2$$