Name: _____

Chapter 5 – Section 5.2 Logarithms and Exponential Models

TICKET-IN-THE-DOOR

In order to be prepared for class you must watch the module and complete the following activity. This is due first thing when you get to class.
Check your understanding:

1. Convert $Q = e^{-.02t}$ to the form $Q = ab^t$

2. Convert $Q = 16(0.487)^t$ to the form $Q = ae^{kt}$

3. State the starting value *a*, the growth rate *r*, and the continuous growth rate *k* of $Q = 230(1.182)^t$.

4. The function $V(t) = 6{,}000(1.08)^t$ gives the value, *V*, of an investment *t* years after the initial investment. How many years until the value of the investment doubles? *Round your answer to the nearest year.*

5. A $5,000 investment earns 7.2% annual interest, and an $8,000 investment earns 5.4% both compounded annually. How long will it take for the smaller investment to catch up to the larger one?