

5.REV.2 – End of Chapter Review

Begin by completing the problem in cell #1. Search for your answer in the remaining cells. Put #2 in the problem blank: # _____. Work that question and proceed in this manner until you complete the circuit.

<p>Answer: 20.0</p> <p># 1 Solve: $2.5e^{0.03t} = 3.7$</p>	<p>Answer: 11.9</p> <p># _____ Find the doubling time for an investment that is growing by 4.6% per year.</p>
<p>Answer: 0.9618</p> <p># _____ $P = 320(0.949)^t$</p> <p>Convert to the form $P = ae^{kt}$.</p> <p><i>The value of k will be the answer to search for.</i></p>	<p>Answer: -2</p> <p># _____ Einsteinium-253 decays at a rate of 3.406% per day. Find its half-life.</p>
<p>Answer: 0.0320</p> <p># _____ $P = 8.4e^{0.17t}$</p> <p>Convert to the form $P = ab^t$.</p> <p><i>The value of b will be the answer to search for.</i></p>	<p>Answer: 26.3</p> <p># _____ Solve: $5(1.014)^{3x} = 12$</p>
<p>Answer: 15.4</p> <p># _____ In 2000, the population of Africa was 807 million and by 2011 it had grown to 1052 million. How many years does it take for the population to double its population in 2000?</p>	<p>Answer: 1.99% & 1.97%</p> <p># _____ The price of a certain item is represented by the function $P = 7.50(1.058)^t$.</p> <p>What is the non-continuous rate?</p> <p>What is the continuous rate?</p>

<p>Answer: 0.5</p> <p># _____ The area of forest is reduced each year because of urban encroachment. If the rate of the area decreases at 2.6% each year, what is the half-life of the forest?</p>	<p>Answer: 29.2</p> <p># _____ Evaluate: $\log_4\left(\frac{1}{16}\right) = x$</p>
<p>Answer: 8.981% & 8.6%</p> <p># _____ $P = 27e^{-0.039t}$</p> <p>Convert to the form $P = ab^t$.</p> <p><i>The value of b will be the answer to search for.</i></p>	<p>Answer: 1.1853</p> <p># _____ $Q = 14e^{0.086t}$</p> <p>What is the non-continuous decay rate?</p> <p>What is the continuous decay rate?</p>
<p>Answer: 20.990</p> <p># _____ Solve: $100^{2x+3} = 1000$</p>	<p>Answer: -0.0523</p> <p># _____ Evaluate: $\log_{225} 15 = x$</p>
<p>Answer: 23.1</p> <p># _____ The world population was 2.5 billion in 1950 and 5.5 billion in 1990.</p> <p>What is the non-continuous rate?</p> <p>What is the continuous rate?</p>	<p>Answer: 13.068</p> <p># _____ $P = 2.6(1.0325)^t$</p> <p>Convert to the form $P = ae^{kt}$.</p> <p><i>The value of k will be the answer to search for.</i></p>
<p>Answer: 5.8% & 5.64%</p> <p># _____ If an investment has a 6% return, compounded annually, in how many years will it double?</p>	<p>Answer: -0.75</p> <p># _____ If a chemical compound decays at a continuous rate of 3% per year, what is its half-life?</p>