









Question	Exponential Growth or Decay?	Write a function that represents this situation	Answer:
<p>1. You buy a house for \$130,000. It appreciates 6% per year. How much is it worth in 10 years?</p> 		<p>Initial Amount =</p> <hr/> <p>Growth/Decay Rate:</p> <p>Percent = _____ Decimal = _____</p> <p>Function that represents this situation:</p>	
<p>2. Justin Beiber is losing 20% of his hair each year. If he currently has 1,546 hairs on his head, about how many hairs will he have left after 10 years?</p> 		<p>Initial Amount =</p> <hr/> <p>Growth/Decay Rate:</p> <p>Percent = _____ Decimal = _____</p> <p>Function that represents this situation:</p>	
<p>3. If you invest \$40 in an account for 10 years at a 3% interest rate compounded semi-annually, how much money will you have?</p> 		<p>Initial Amount =</p> <hr/> <p>Growth/Decay Rate:</p> <p>Percent = _____ Decimal = _____</p> <p>Function that represents this situation:</p>	
<p>4. A population of 100 frogs increases at an annual rate of 22%. How many frogs will there be in 5 years?</p> 		<p>Initial Amount =</p> <hr/> <p>Growth/Decay Rate:</p> <p>Percent = _____ Decimal = _____</p> <p>Function that represents this situation:</p>	

<p>5. A species of extremely rare, deep water fish are slowly becoming extinct. If there are a total 821 of this type of fish and there are 15% fewer fish each month, how many will there be in half a year?</p> 		<p>Initial Amount =</p> <hr/> <p>Growth/Decay Rate:</p> <p>Percent =</p> <p>Decimal =</p> <p>Function that represents this situation:</p>	
<p>6. The population of Austin is growing at a rate of 5% per year. In 2010, the population was 500,000. What would be the predicted current population?</p> 			
<p>7. Use the equation from the previous question and predict in what year Austin's population will first reach 1,000,000.</p>			
<p>8. Carbon-14 has a half-life of 5,730 years. If a fossil that originally had 500 mg of carbon-14 is found and determined to be 27,000 years old, how much carbon-14 was left?</p> 			
<p>9. A super-deadly strain of bacteria is causing the zombie population to double every 2 days. Currently, there are 25 zombies. After how many days will there be 25,600 zombies?</p>  <p>(Careful with this one!!!)</p>			