

Final Practice #3:

Exponential Equations

<p>1. Danielle invested \$400 into an account with an interest rate of 5.5% per year. How much money will be in the account in 8 years?</p>	<p>2. The population of a bacteria in a petri dish is 700, but it is dying off at about 15% per day. How much bacteria will be left after 30 days?</p>
<p>3. A viral YouTube video currently has 250,000 views and this number is increasing at a rate of 9.5% per day. How many views will it have after 12 days?</p>	<p>4. The number of trees in a forest begins at 800, and increases by 30 trees per year. How many trees will be in the forest after 15 years?</p>

Solve:

1. $5^{3x} = 5^{7x-2}$

2. $2^x \cdot 2^{x+4} = (2^3)^{x+1}$

3. $3^x = 9^{x+5}$

4. $4^x = \left(\frac{1}{8}\right)^{x-1}$