Exponential Growth/Decay Classwork Name _____

Give the initial value for each function. Determine the percent rate of change and indicate whether it is growth or decay.

1. $f(x) = 72(2.6)^x$
2. $p(t) = 300(.25)^t$
3. $b(t) = 0.5(3)^t$
4. $f(x) = 948.5(1.73)^x$
5. A new droid cruiser that sells for 18,000 depreciates 25% each year. Write a function that models the value of the cruiser. Find the value of the cruiser after 4 years.
6. A population of Gungans increases at a rate of 2% each year. There are 1,573 Gungans in the year 2135. Write a function that models the population where $t = 0$ is the year 2135.
7. Find the population of Gungans in the year 2148 using the formula from Problem #6.
8. A new Millienium Falcon that sells for 29,000 star bucks depreciates at a rate of 12% each year. Write a function that models the value of the Falcon.
9. Find the value of the Falcon in 13 years using the formula from Problem #8.