

Name:

Math 1

Date:

Practice Quiz 5-C

1. For each of the following functions, circle whether it shows exponential growth or exponential decay. Then state the growth or decay factor, and state the growth or decay rate as a percentage.

a) $a(x) = 0.94^x$

b) $b(x) = 3(2.12)^x$

c) $c(x) = \left(\frac{8}{9}\right)^x$

d) $d(x) = 5^x$

circle one: growth / decay

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growth or decay factor: _____

growth or decay factor: _____

growth or decay factor: _____

growth or decay factor: _____

growth or decay rate: _____%

growth or decay rate: _____%

growth or decay rate: _____%

growth or decay rate: _____%

2. The world's population is currently 8.2 billion, a gain of about 1.1% from a year ago.

a) Write a function to estimate the world population t years from now.

b) Use the function to estimate the world population in 2032.

3. Jack invests \$9650 at 5.25% interest compounded daily.

a) Write a function that shows the total amount after t years.

b) How much interest will he earn in five years?

c) What is the growth rate per day?

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