Ch.8 – Exponential Functions

Study Guide

Name _____ PER_____ DATE_____

FLE1 - Distinguish between situations that can be modeled with linear functions and with exponential functions.

1. Show your work and box your answer to the question below.

The table below shows how the populations of 3 different types of plants in a meadow changed during a 4-year period.

Populations of 3 Types of Plants During a 4-Year Period

Year	Thistles	Buttercups	Blueberries
1	271	512	326
2	317	448	309
3	323	392	292
4	348	343	299

The population of one kind of plant is changing by a constant percent rate each year. What is the percent change in the population of that kind of plant each year?

FLE2 - Construct … exponential functions, …, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).

2. Annotate the problem below and box your answer.

Tracy buys a car for $26,000. The value of the car is expected to decrease by 17% each year. Write a function that can be used to determine $f(y)$, the value of Tracy's car after y years.

FLE5 - Interpret the parameters in an ... exponential function in terms of a context.

3. After choosing the correct statement below, explain your reasoning in two sentences.

The amount of money in a bank account is changing according to the equation $y = 500(1.04)^t$, where y = amount in dollars and t = time in years. Which statement describes this situation?

A. The initial amount in the account is $500, and the annual interest rate is 4%.
B. The initial amount in the account is $500, and the annual interest rate is 1.04%.
C. The initial amount in the account is $520, and the annual interest rate is 1.04%.
D. The initial amount in the account is $520, and the annual interest rate is 4%.

I know my answer is true because _____

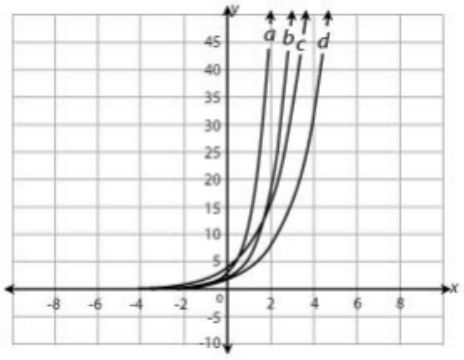
_____

_____

FIFC7e Graph exponential ... functions, showing intercepts and end behavior...

4.

Look at the graphed functions below.



Which of the functions has the most rapid rate of change as x increases beyond zero?

A. a
B. b
C. c
D. d

5.

The table shows pairs of values for a certain exponential function.

x	−4	−3	−2	−1	0
$f(x)$	−0.0008	−0.004	−0.02	−0.1	−0.5

Based on the values in the table, what happens to $f(x)$ as x continues to increase?

A. It approaches zero from a negative direction.
B. It approaches negative infinity.
C. It approaches zero from a positive direction.
D. It approaches positive infinity.

PARENT SIGATURE: _____