

Name

Write and Graph

Alg I

Exponential Growth models

I can write and graph exponential growth models.

Exponential Growth model:

$$y = a(1+r)^t$$

$a$ : initial amount

$r$ : Growth Rate

$1+r$ : Growth Factor

$t$ : Time period

h. 7 Quiz

Example 4:  $a = 11,000$   $r = 0.069$

$t = 10$

$$5) y = 11,000(1 + 0.069)^{10}$$

$$y = 11,000(1.069)^{10}$$

$$y = 11,000(1.949)$$

$$y = 21,437$$

\* Complete Skills Practice, pg. 462, #

Compound Interest: Exponential Growth Model, where  $a$  = initial investment,  $r$  = annual interest rate and  $t$  = number of years invested

Example 5:  $a = 250$   $r = 0.035$   $t = 5$

$$6) y = 250(1 + 0.035)^5$$

$$y = 250(1.035)^5$$

$$y = 250(1.188)$$

$$y = 296.92$$