The base exponential function is $y = a(b)^x$

- a represents the initial amount
- b represents the rate it is changing by

Sometimes a rate is given in terms of a percent.

If the event is increasing by a given percent it is a growth function If the event is decreasing by a given percent it is a decay function

Base		
y = a (b.)*	y = a(1++)*	$y=a(1-r)^x$
nearanna Earnanna	(Company) (Company)	properties and the second of the
a= initial value —— b = rate (whole number)	r = percent	
	(IN DECIMAL FORM!)	
engapapan eta berentak piantak Luar berta banan eta papa ber		Reducina explored in the series in the constraint of the series

USING PERCENTS IN AN EQUATION

- * Increasing by 25%
 - 1+.25 = (1,25
- Decreasing by 25%

INCREMSE BY 10%.

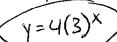
≈ Increasing by 2.3%

■ Decreasing by 4%

DECREASE

EXAMPLE I-BASE FUNCTION

Four bunnies are left on an island. The amount of bunnies is tripling every month. Write a model to represent this function and determine how many bunnies will be on the island after a year



8125,764 BUNDIES!

EXAMPLE 2: GROWTH FUNCTION:

The cost of tuition and room for a 4 year state university averages \$20,090. The average increase in cost is about 9% each year. How much can you expect to pay for tuition when you graduate in 4 years?

,09

14.09 = 1.09

20090(1.09)4

EXAMPLE 3: DECAY FUNCTION

You bought a new iPhone 7 for \$649. The price of the iPhone depreciates about 44% each year. How much can you predict you could sell your iPhone for two years from now!

hone for two years from new?

$$Y = 649 (.56)^{X}$$
 $1 - .44 = .56$

649(.56)2=