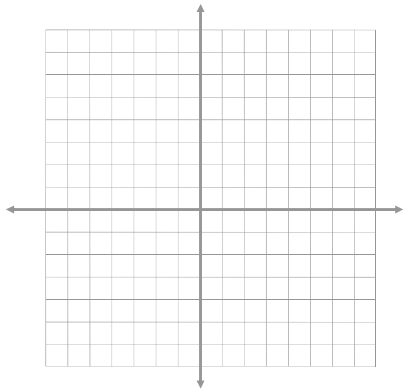
# Exponential Functions

## Graphing from the Equation

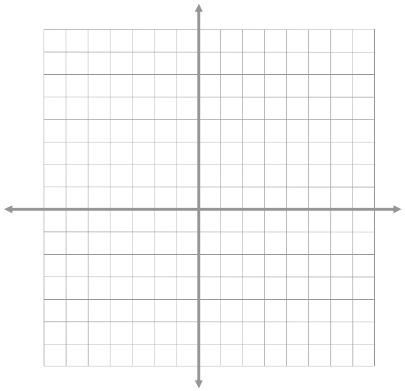
$f(x) = 2^x$

| x | y |
|---|---|
| -3 | |
| -2 | |
| -1 | |
| 0 | |
| 1 | |
| 2 | |
| 3 | |



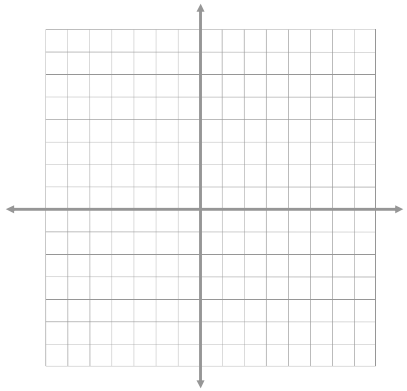
$f(x) = 3^x$

| x | y |
|---|---|
| -3 | |
| -2 | |
| -1 | |
| 0 | |
| 1 | |
| 2 | |
| 3 | |



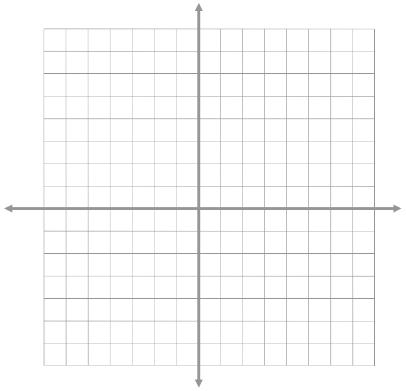
$f(x) = \left(\frac{1}{2}\right)^x$

| x | y |
|---|---|
| -3 | |
| -2 | |
| -1 | |
| 0 | |
| 1 | |
| 2 | |
| 3 | |



$f(x) = 3 \cdot 2^x$

| x | y |
|---|---|
| -3 | |
| -2 | |
| -1 | |
| 0 | |
| 1 | |
| 2 | |
| 3 | |



Form of the Equation: $y =$_____

Three Key Ordered Pairs:

- (  ,  )
- (  ,  )
- (  ,  )

## Growth or Decay?

$f(x) = 0.5 \cdot (4)^x$ $a =$ $b =$ $growth \ / \ decay$

$f(x) = 200 \cdot (1.1)^x$ $a =$ $b =$ $growth \ / \ decay$

$f(x) = 30 \cdot (0.1)^x$ $a =$ $b =$ $growth \ / \ decay$