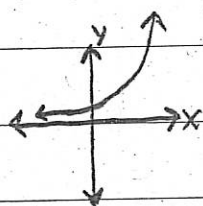


Exponential Functions

$y = a \cdot b^x$, where $a \neq 0$, $b > 0$, $b \neq 1$, x is a real number

Examples:



x	1	2	3	4
y	3	12	48	192

Arrows indicate the progression: from x=1 to x=2, x=2 to x=3, and x=3 to x=4, each labeled with a '+' sign above the arrow. Below the table, arrows point from y=3 to y=12, y=12 to y=48, and y=48 to y=192, each labeled with 'x4' below the arrow.

Evaluate each function for the given value.

① $f(x) = 3 \cdot 2^x$, where $x=5$

$$= 3 \cdot 2^5$$

$$= 3 \cdot 32$$

$$= \boxed{64}$$

② $y = 18 \cdot (.015^x)$, $x=3$

$$y = 18 \cdot (.015^3)$$

$$y = 18 \cdot (.000003375)$$

$$y = .00006075$$

$$y = \boxed{6.075 \times 10^{-5}}$$

Graph $y = .2(3^x)$

X	Y	X	Y
-3	.0074	2	1.8
-2	.0222	3	5.4
-1	.0667	4	16.2
0	.2	5	48.6
1	.6	6	145.8

