

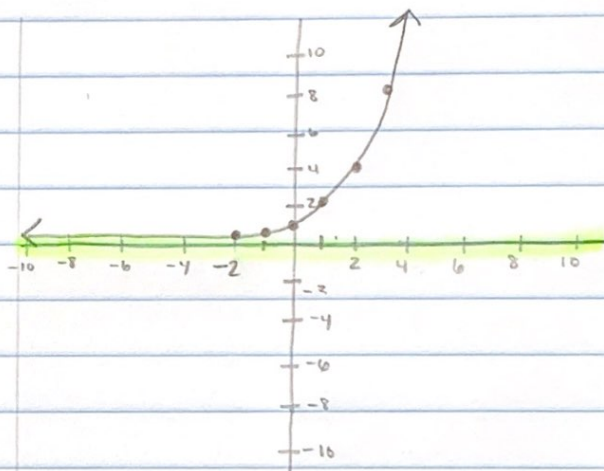
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Exponential and Logarithm Page

*We will use base=2 for both of these but the base can change in any problem to another value.

$$y = 2^x$$

X	Y	Exponential: $f(x) = 2^x$
-2	$2^{-2} = \frac{1}{4}$	D: $(-\infty, \infty)$ R: $(0, \infty)$
-1	$2^{-1} = \frac{1}{2}$	Sym: None Even/Odd: Neither
0	$2^0 = 1$	One-to-one: Yes Asy: $y = 0$
1	$2^1 = 2$	X-int: None Y-int: $(0, 1)$
2	$2^2 = 4$	Min: — Max: —
3	$2^3 = 8$	End Behavior: as $x \rightarrow \infty, y \rightarrow \infty$ as $x \rightarrow -\infty, y \rightarrow 0$



$y = \log_2 X$ Logarithmic: $f(x) = \log_2 X$

(log + exp are inverses so you just switch the x's + y's from the exp.)

X	Y	Logarithmic: $f(x) = \log_2 X$
$\frac{1}{4}$	-2	D: $(0, \infty)$ R: $(-\infty, \infty)$
$\frac{1}{2}$	-1	Sym: None Even/Odd: Neither
1	0	One-to-one: Yes Asy: $X = 0$
2	1	X-int: $(1, 0)$ Y-int: none
4	2	Min: — Max: —
8	3	End Behavior: as $x \rightarrow \infty, y \rightarrow \infty$ as $x \rightarrow 0, y \rightarrow -\infty$

