work

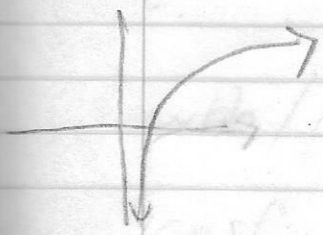
Logarithmic functions

(2) $y = \log_5(x-1) + 3$

Domain: $(1, \infty)$

Range $(-\infty, \infty)$

↳ must be greater than zero



no zeros
no negatives

$x - 1 > 0$
$+1 \quad +1$
$x > 1$

1/3 Convert to exponential
make table of values to graph

exponent base solution

$(y-3) = \log_5 (x-1)$

$5^{y-3} = x-1$

start w/ y-values

x	y
2	3
6	4
26	5
	2

to make easiest use values to get whole numbers

$1 = x-1$
$+1 \quad +1$
$2 = x$

$5^0 = 1$
$5^1 = 5$
$5^2 = 25$
etc.

$5 = x-1$
$+1 \quad +1$
25