

Graphing Exponential and Logarithmic Functions - Matching Worksheet

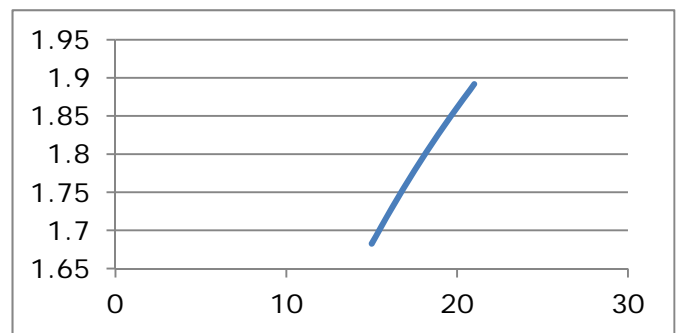
Write the letter of the answer that matches the problem.

1. Graph $f(x) = 2^{1-x}$

- Since $1-x$ is zero when $x=1$, we will choose x values around 1 in our table of values. Also, let's graph 2^x on the same axes for comparison.

a.

$x=3^y$	y	(x, y)
15	1.68	(15, 1.68)
17	1.76	(17, 1.76)
19	1.82	(19, 1.82)
21	1.89	(21, 1.89)



2. Graph $f(x) = \log_3 x$.

- Rewriting $f(x) = y = \log_3 x$ in exponential form we get $x = 3^y$. We can graph $x=3^y$ by using the same method for exponential function, except this time we will choose values for y and then compute the corresponding values for x .

b.

x	2^{1-x}	(x, y)
8	$\frac{61}{250000}$	(8, 0.000244)
9	$\frac{1227}{2000}$	(9, 6.1035)
10	$\frac{7629}{5000}$	(10, 1.5258)
11	$\frac{3814}{10000}$	(11, 3.814)
12	$\frac{1192}{125}$	(12, 9.536)

