

List the transformation of the following functions.

1.  $f(x) = 5\log(x-1)$

- V. Stretch by 5
- Shift Right 1

2.  $f(x) = \frac{1}{2}\log(x+4) - 7$

3.  $g(x) = 2\ln(x) + 9$

- V. Stretch by 2
- Shift Up 9

4.  $g(x) = -3\ln(x+1)$

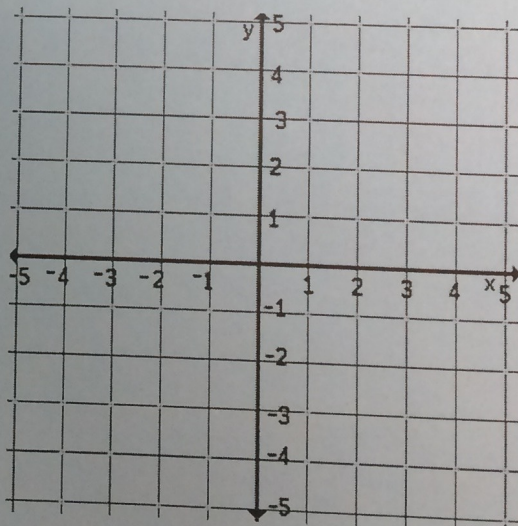
Identify the transformations. Then graph the function and state the domain and range.

1.  $f(x) = \log(x-1) - 1$

Transformations:

Domain:

Range:





2.  $f(x) = \log(x+3) + 1$

Transformations:

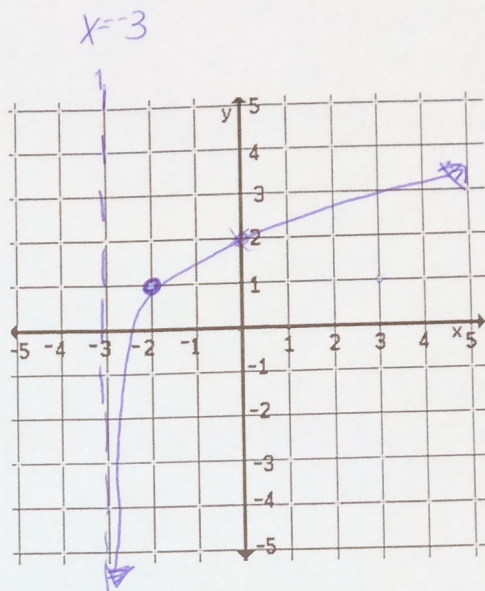
- Shift Left 3
- Shift up 1

Domain:

~~$(-3, \infty)$~~

Range:

$(-\infty, \infty)$

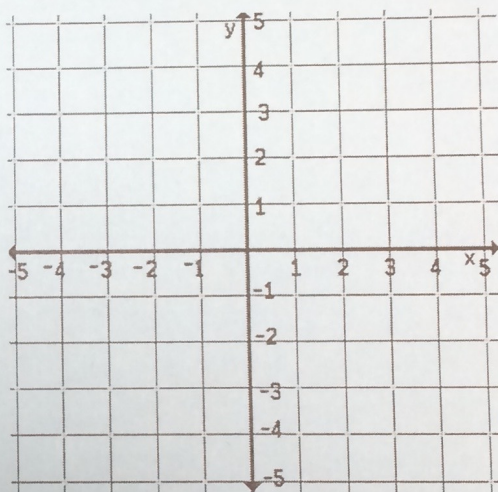


3.  $f(x) = \ln(x-4) + 3$

Transformations:

Domain:

Range:



4.  $f(x) = \log(x+2) + 1$

Transformations:

- Shift Left 2
- Shift up 1

Domain:

Range:

$(-\infty, \infty)$

