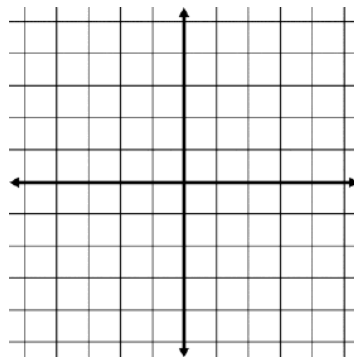
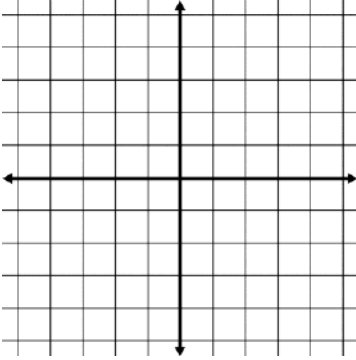


Describe the transformation from the base logarithm then answer questions one and two to help sketch the graph.

$$f(x) = \ln(x+1) - 2$$

$$f(x) = -3\log(2-x) - 1$$



1) Determine the vertical asymptote

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2) Determine the x-intercept

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3) Determine the domain and range

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4) Intervals of Increase or Decrease

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5) Determine the end behavior

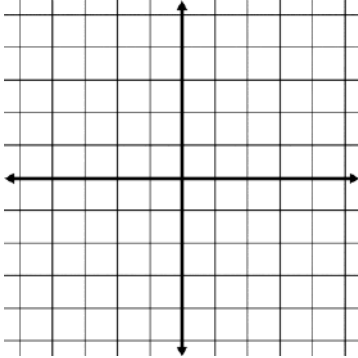
5) Determine the end behavior

6) Intervals of Concavity

6) Intervals of Concavity

Describe the transformation from the base logarithm then answer questions one and two to help sketch the graph.

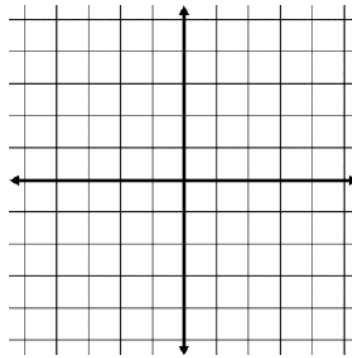
$$f(x) = \ln(-x) + 2$$



1) Determine the vertical asymptote

2) Determine the x-intercept

$$f(x) = \log(4-x)$$

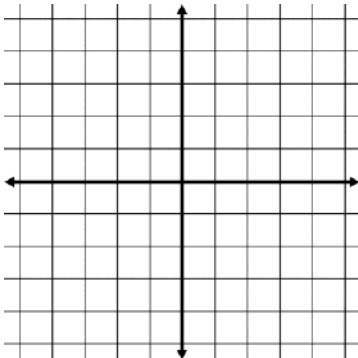


1) Determine the vertical asymptote

2) Determine the x-intercept

Describe the transformation from the base logarithm then answer questions one and two to help sketch the graph.

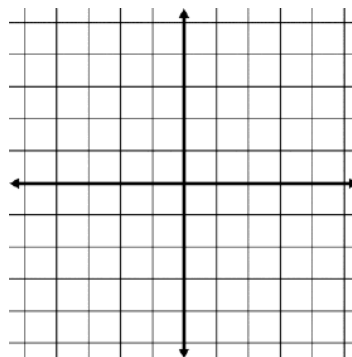
$$f(x) = -2\ln(x) - 1$$



1) Determine the vertical asymptote

2) Determine the x-intercept

$$f(x) = 2\log(x-1) + 2$$



1) Determine the vertical asymptote

2) Determine the x-intercept