

2/11

## Logarithmic Functions

$$f(x) = \log_b x$$

$$\log_{10} x$$

Parent:  $f(x) = \log_b x$

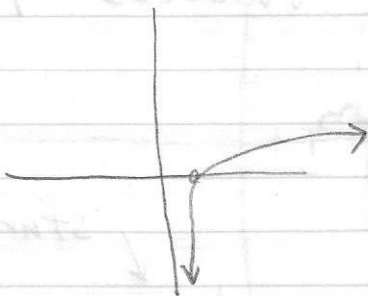
domain  $(0, \infty)$

range  $(-\infty, \infty)$

x-int  $(1, 0)$

y-int none

asymptote: y-axis



Reflections  
in the line  
 $y = x$

$$f(x) = e^x$$

natural base  
exponential function

$$f(x) = \ln x$$

natural logarithm equivalent  
to  $f(x) = \log_e x$

- Solve logarithmic eqns
  - rewrite in exponential form to solve
- Solve exponential eqns
  - use logarithms to solve