How to find the Inverse Function of a One-to-One Function f(x):

- write $y = f(x)$
- solve for x
- to express f^{-1} as a function of x, interchange x and y.

1. Check if the following functions are one-to-one and find $f^{-1}(x)$ for each of them:

   (a) $f(x) = 2x$

   (b) $f(x) = x^3$

2. Without explicitly finding a formula for $f^{-1}(x)$, find $f^{-1}(1)$ for each function below:

   (a) $f(x) = x - 20$

   (b)

x	0	0.25	0.5	0.75	1	1.25	1.5	1.75	2.0
$f(x)$	20	10	5	3	2.5	2	1.5	1	0.25

3. Evaluate $\cos^{-1}(0)$.

4. Find the exact value of each expression.

   (a) $\log_2 16$

   (b) $e^{\ln 5}$

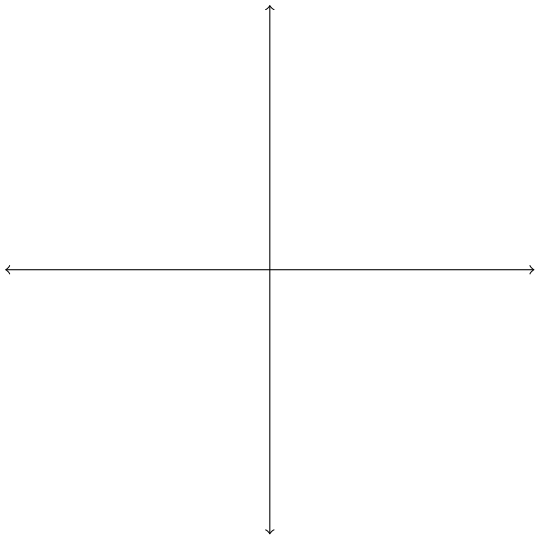
5. Solve each equation below for x.

   (a) $10 = 2e^{x+1}$

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

6. Sketch each function. Include domain, range, intercepts and asymptotes.

   (a) $f(x) = \ln(x+1)$



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