

Homework #1

Assigned: 01/21/12

Due: 01/28/12



1. Graph $y = f(x) = \frac{x^2 - 4}{x - 1}$

2. Solve for x :

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

b) $e^{2x+3} - 7 = 0$

c) $|x-1| - |x-3| \geq 5$

d) $e^{ax} = ce^{bx}$, $a \neq b$

e) $\ln x + \ln(x-1) = 1$

3. Write $y = (x - \frac{1}{3}y)^{-4}$ without using $()$ or negative exponents.

4. If $f(x) = x+4$ and $h(x) = 4x-1$, find g such that $g \circ f = h$

5. Express using $f \circ g \circ h$: $H(x) = \sqrt[3]{2+|x|}$

6. Find the equation of a parabola passing through $(0, -1)$, $(-1, -4)$, $(1, -2)$

7. If $f(x) = \frac{x+3}{x+1}$, find $\frac{f(x) - f(1)}{x-1}$

8. Graph: $y = \operatorname{arccsc}(x)$