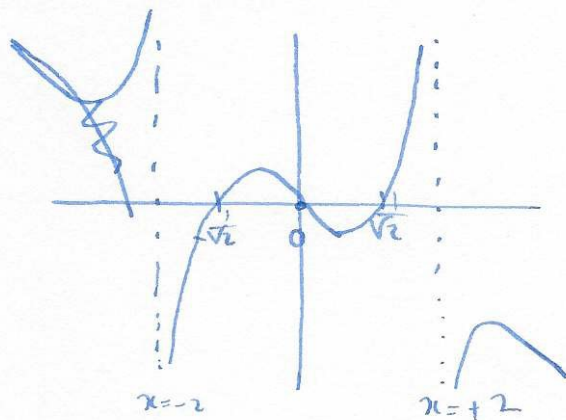
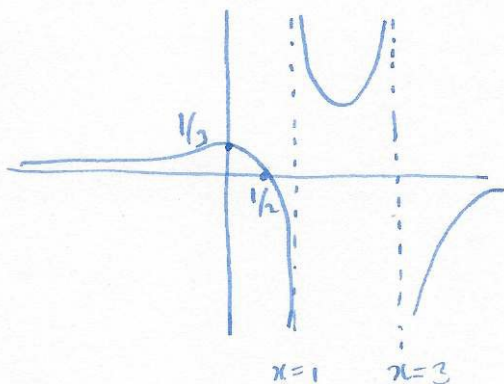


MTH 130 Precalculus, Classwork 9

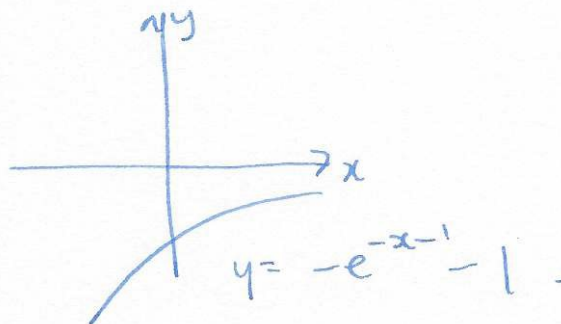
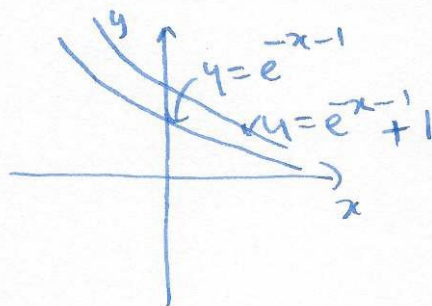
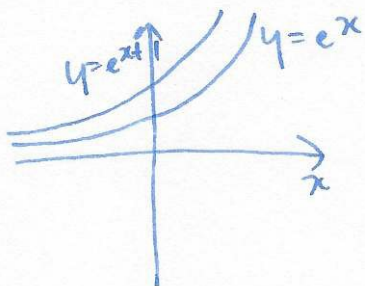
$(1-\sqrt{2}x)(1+\sqrt{2}x)$
" Fall 2014

(1) Sketch the graphs of $\frac{1-2x}{x^2-4x+3}$ and $\frac{x-2x^3}{x^2-4} = \frac{x(1-2x^2)}{(x-2)(x+2)}$

$\frac{1-2x}{(x-3)(x-1)}$



(2) Sketch the graph of $-e^{-x-1} - 1$ by drawing e^x and using transformations.



(3) If I leave \$100 in my bank account at 10% interest, compounded yearly, how much will I have after 2 years? Suppose you compound monthly? Suppose you compound continuously?

$A(t) = P \left(1 + \frac{r}{n}\right)^{nt}$ (n periods) $A(t) = P e^{rt}$ (continuous)

compound yearly: $n=1$ $A(2) = 100 \left(1 + \frac{0.1}{1}\right)^2 = \121

monthly: $n=12$ $A(2) = 100 \left(1 + \frac{0.1}{12}\right)^{12 \times 2} \approx \122.0391

continuously: $A(2) = 100 e^{0.1 \times 2} \approx \cancel{\$122} \$122.1403$