WS Exponential and Logarithmic Practice

1)   Mr. Schwent invests $5000 in an account that pays 2.8% annual interest
        compounded quarterly. How long will it take to double this investment?

2)   Ms. Long invests $200 in an account that pays 3.6% annual interest compounded
        semiannually. How long will it take for this investment to reach a value of $1000?

3)   Find the equation of the INVERSE of each function.

        a) $f(x) = 5 \cdot 3^{x+1} - 4$ b) $g(x) = \log_4(x+3) - 6$
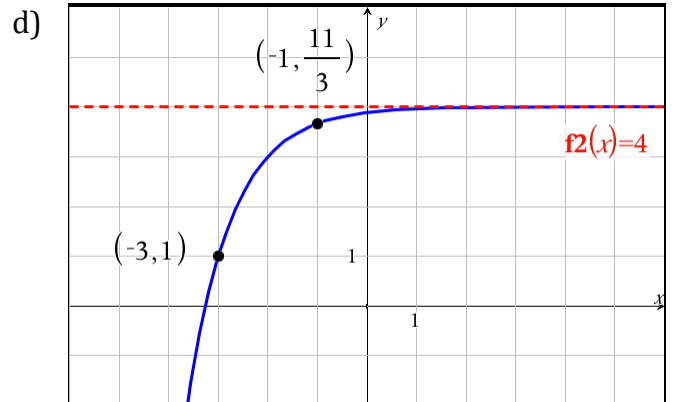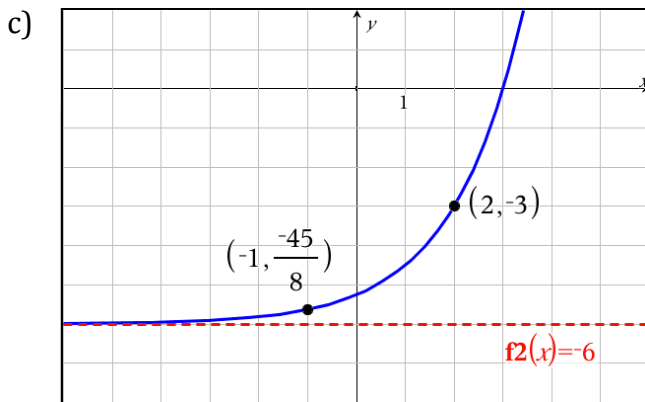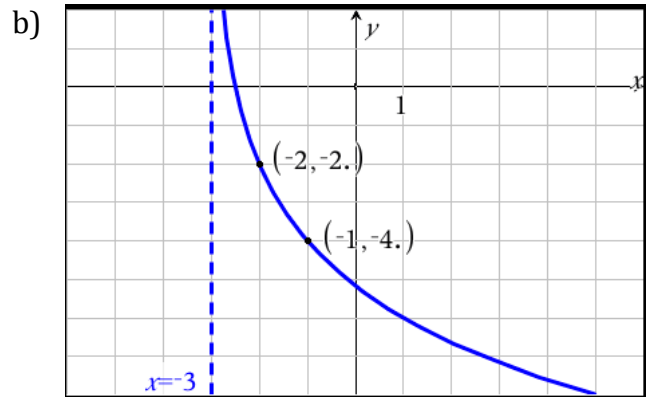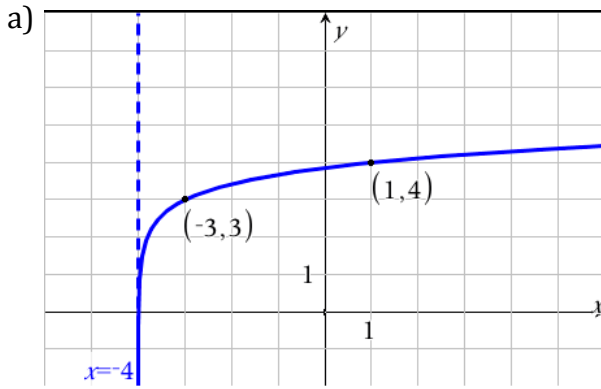
4) Solve each equation.

a) $4\log_5(3x-7)+6=18$

b) $4\cdot 5^{x-8}+7=19$

c) $4\log_2(x^2-4x)+16=36$

d) $3\cdot 7^{x^2+2x}-2=25$

5) Write the equation of each graph.

a)

$(1,4)$
$(-3,3)$
$x=-4$

b)

$(-2,-2.)$
$(-1,-4.)$
$x=-3$

c)

$(2,-3)$
$\left(-1,\dfrac{-45}{8}\right)$
f2$(x)=-6$

d)

$\left(-1,\dfrac{11}{3}\right)$
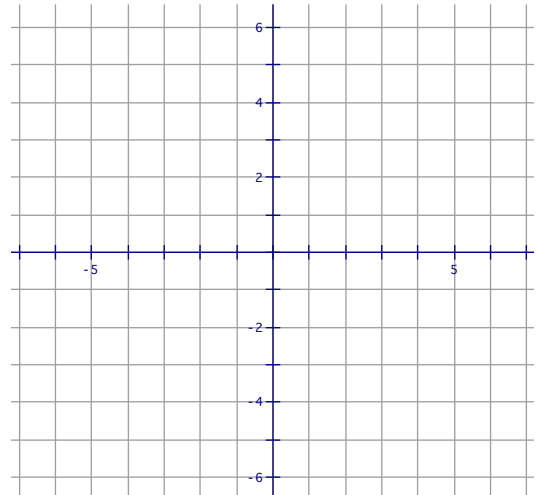f2$(x)=4$
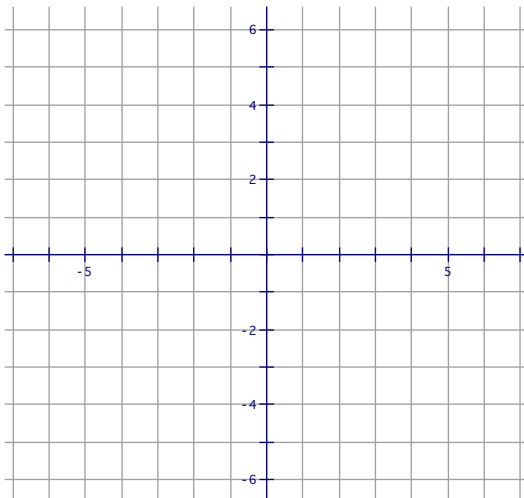$(-3,1)$

6)   Graph each equation.

a) $f(x) = \log_3(x-1) - 3$
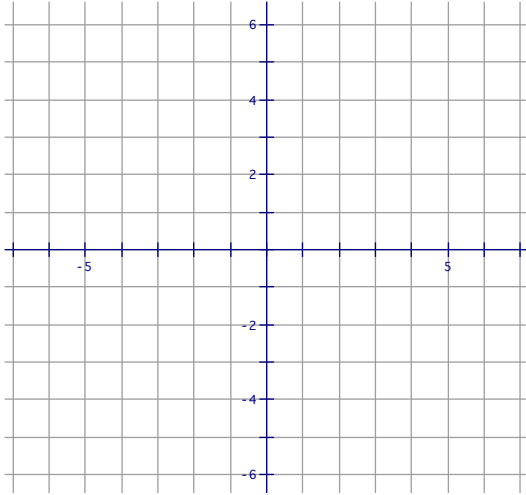
b) $f(x) = \log_{\frac{1}{2}}(x+4) + 2$

c) $f(x) = -\log_4(x+2) + 3$

d) $f(x) = \log_3 x - 1$