

Your signature _____

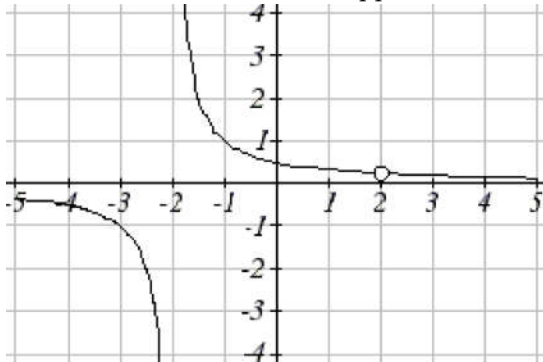
Show your steps, and work on another piece of paper. Unless otherwise indicated: Each question is scored: 2 points for the correct answer; 3 points for the correct work. Partial credit may be awarded.

Solve.

1) $|6x - 7| \geq 3$

2)

Write a rational function that approximates the graph below. Make sure to show your explanation:



Solve the exponential equation.

3) $2^{x+3} = 8^x$

Solve the logarithmic equation.

4) $\log(x + 3) = 2 - \log x$

Solve.

5) How long will it take for \$6400 to grow to \$45,400 at an interest rate of 4.3% if the interest is compounded quarterly? Round the number of years to the nearest hundredth.

Solve using the additon (Linear Combinations) method. Use a graphing calculator to check your answer.

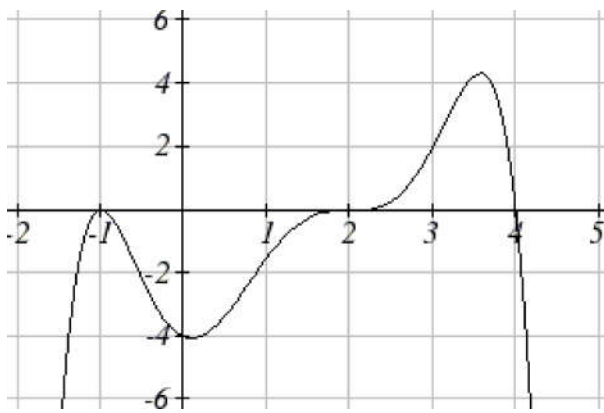
6) $x - 4y = 10$
 $3x - 5y = 23$

Find the equation of the line in point-slope form of the line satisfying the given conditions.

7) through (5, -8) and (9, -7)

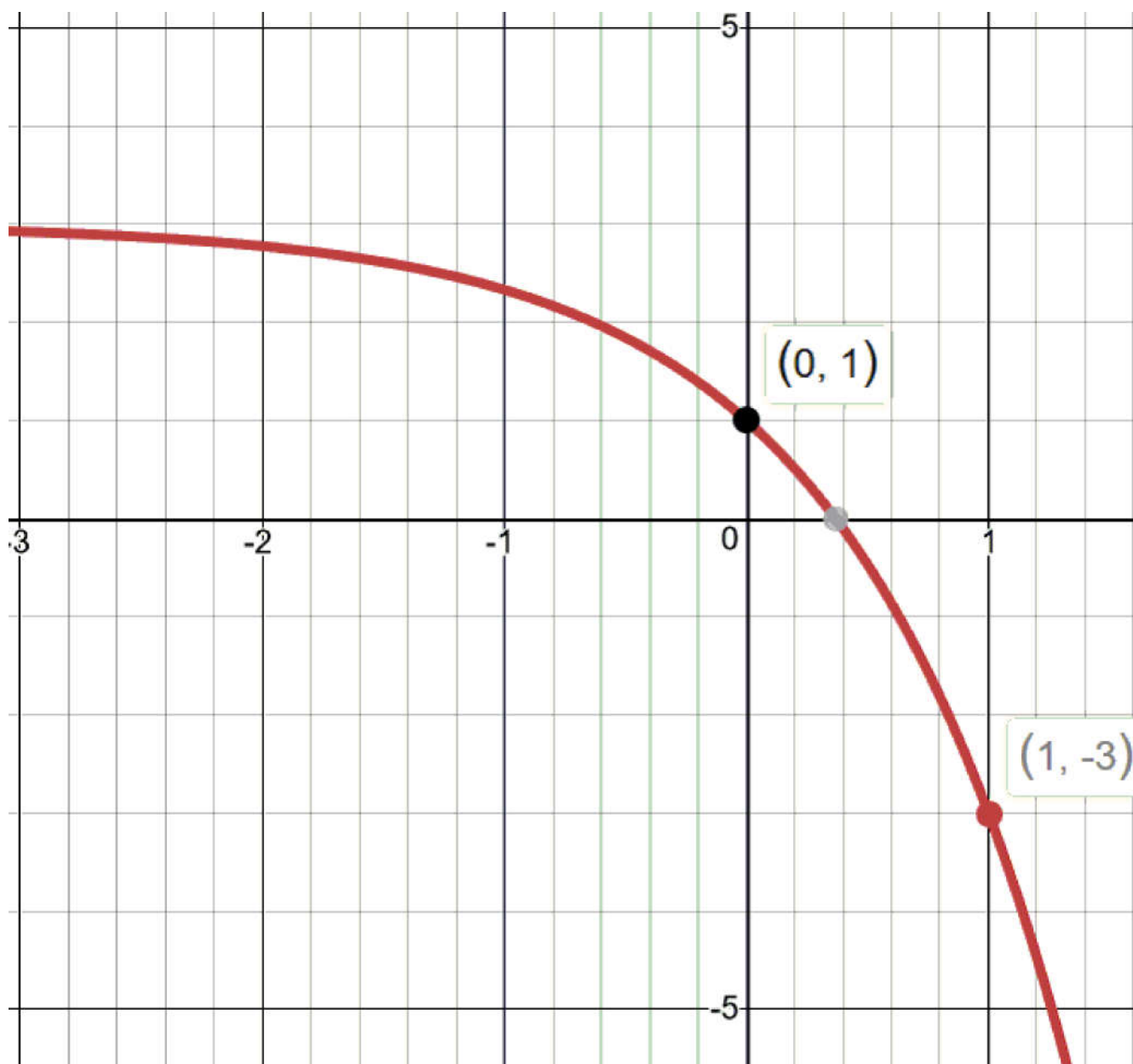
8)

Write a polynomial function for the graph below. Don't forget to find "a"



9)

Write an exponential function for the graph below



10)

For the function you created in #9, write the inverse function and show how the points $(-3, 1)$ and $(1, 0)$ are points on this function.