Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Algebra 2 Last mid-term Review

1. Solve the following system algebraically: x2+ x – y = -1

x + y = 4

1. Determine whether the function is even, odd, or neither:
2. f(x) = -x4 + 6x2 – 13 b) g(x) = x3 – 12x
3. Convert the quadratic equation into vertex form: y = x2 – 10x + 6
4. Factor completely: a) 4x3 – 16x2 – 9x + 36 b) 81a4 – 256
5. Simplify: 
6. Write the equation of the parabola with a focus at (-2, 3) and a directrix at y = -5.
7. Is (x + 1) a factor of f(x) = 4x3 -21 x2 + 9x + 34?

What are all the roots of this equation?

1. Solve: 
2. A baseball follows the path with the equation f(x) = -16t2 + 32t + 4. What is the maximum height it reaches? How long is the ball in the air?
3. What are the equations of the asymptotes of y = ?