Name _____   Date _____
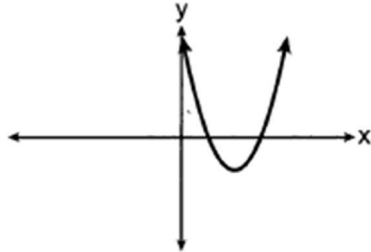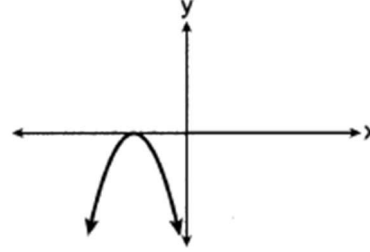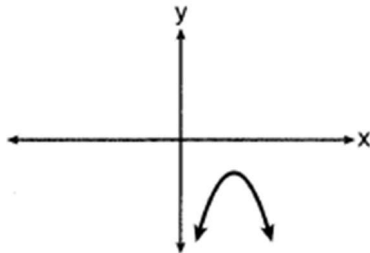Mr. Schlansky   Algebra II

Imaginary Zeros
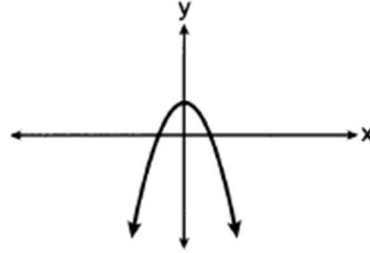
1. Which graph has imaginary roots?
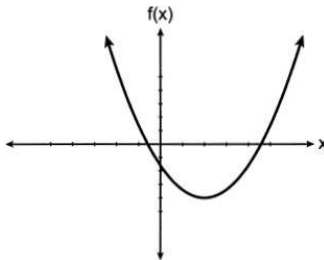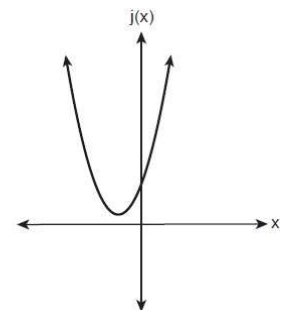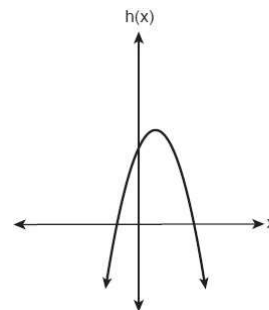
1)

3)

2)

4)

2. If $f(x)$ is represented by the graph below, Does $f(x)$ have imaginary roots? Explain your answer.

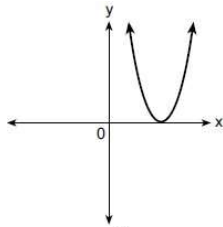3. Which quadratic functions have imaginary roots?
1) $h(x)$ only
2) $j(x)$ only
3) Both $j(x)$ and $h(x)$
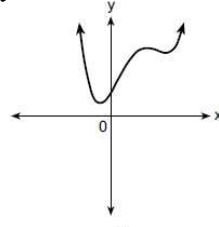4) Neither $j(x)$ or $h(x)$

4. Does the equation $x^2 - 4x + 13 = 0$ have imaginary solutions? Justify your answer.

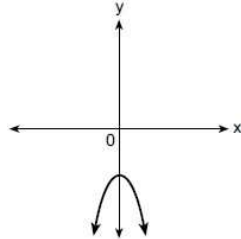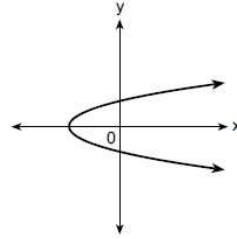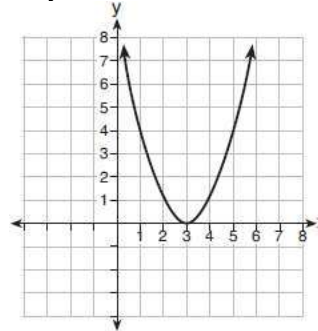5. Which of the following graphs have imaginary zeros?

I

II

III

IV

1) I and IV   3) II only
2) II and III   4) III and IV

6. Which representation of a quadratic has imaginary roots?

1)

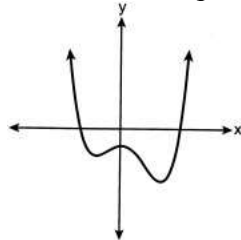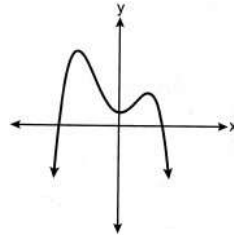| x	y
−2.5	2
−2.0	0
−1.5	−1
−1.0	−1
−0.5	0
0.0	2

3)

2) $2(x+3)^2 = 64$

4) $2x^2 + 32 = 0$

7. Which graph could represent a 4th degree polynomial function with a positive leading coefficient, 2 real zeros, and 2 imaginary zeros?
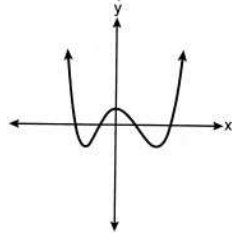
1)

3)

2)

4)

16