

Real zeros hit the x-axis
Imaginary zeros don't

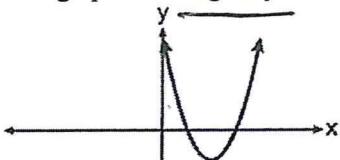
Name Schlansky
Mr. Schlansky

Date _____
Algebra II

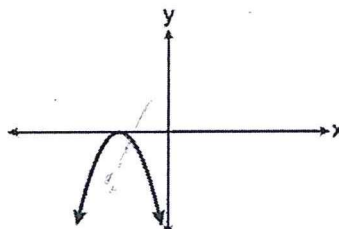
Imaginary Zeros

1. Which graph has imaginary roots?

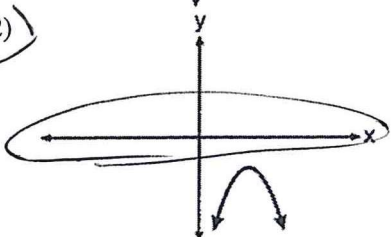
1)



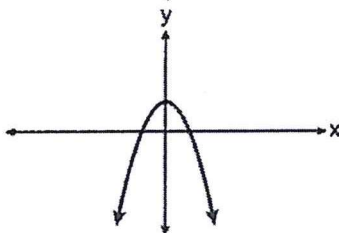
3)



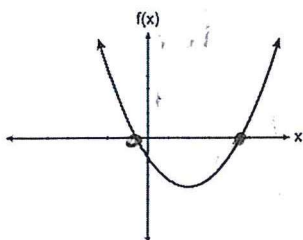
2)



4)



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



No, the roots are real because the graph hits the x-axis

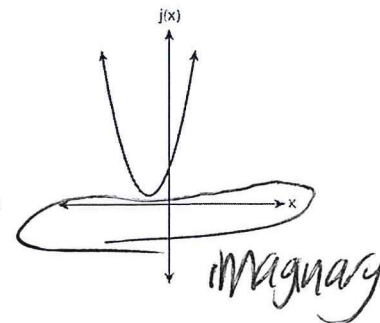
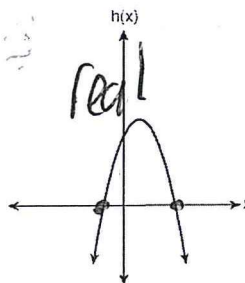
3. Which quadratic functions have imaginary roots?

1) $h(x)$ only

2) $j(x)$ only

3) Both $j(x)$ and $h(x)$

4) Neither $j(x)$ or $h(x)$

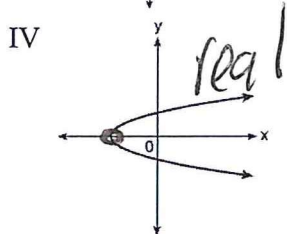
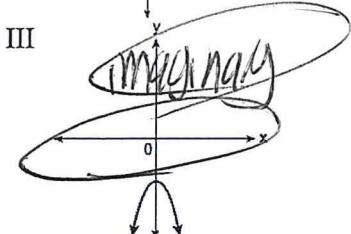
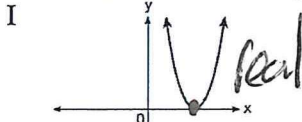


4. Does the equation $x^2 - 4x + 13 = 0$ have imaginary solutions? Justify your answer.

type into $y=$
+ ↺

yes, the graph doesn't touch the x-axis

5. Which of the following graphs have imaginary zeros?

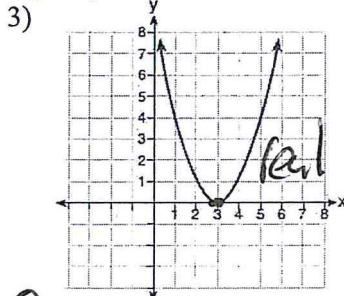
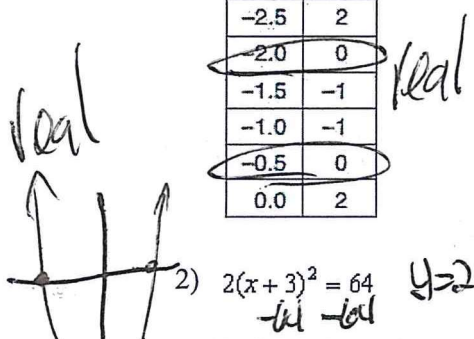


- 1) I and IV
 2) II and III
 3) II only
 4) III and IV

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



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

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

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

