

College Algebra MAT 121 Test 3
Take-home portion
20 Points

Name _____

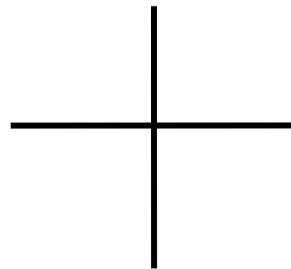
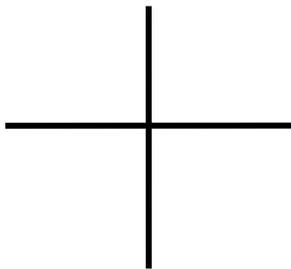
Bring the completed test with you to class on Wednesday.

1. What is a zero of a polynomial? What is the difference between a real zero and a complex zero? What does this mean with respect to the graph?

2. For each of the following polynomials draw the end behaviors on the graph.

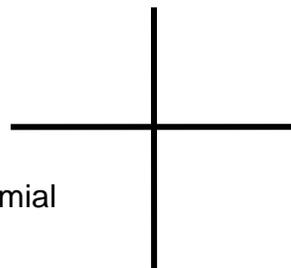
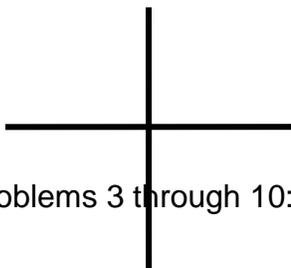
a. $f(x) = -4x^5 - 3x^4 + 2x + 7$

b. $g(x) = 3x^4 - 5x^2 + 7x - 2$



c. $h(x) = 4x^3 + 2x^2 - 8x + 1$

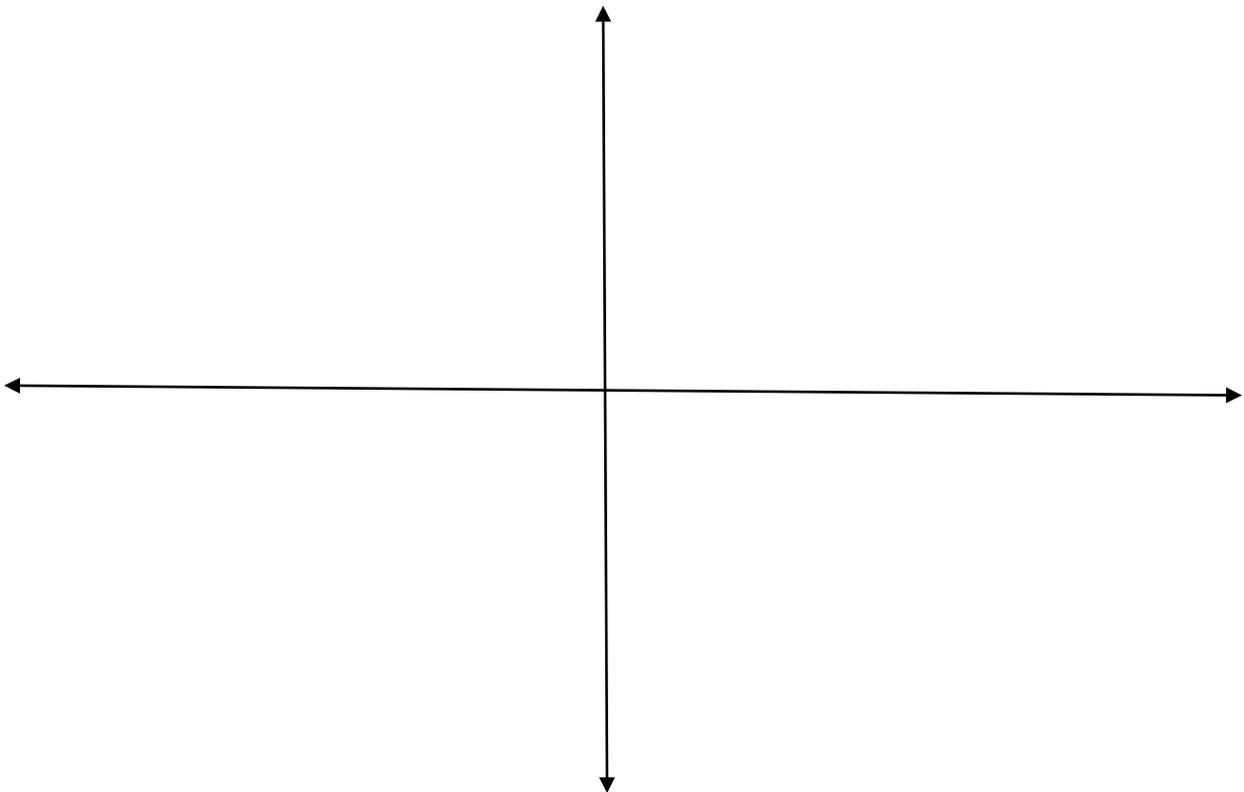
d. $p(x) = -2x^6 + 5x^4 - 4x^3 + 2x - 5$



For problems 3 through 10: Given the polynomial

7. How do you find the y intercept and what is it?

8. Sketch the graph of $f(x)$.



9. Discuss how your graph supports the conclusions from questions 2 through 6.

10. Use other methods to further verify your graphical results.