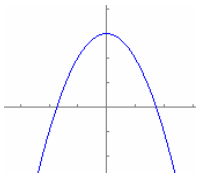
Sample Questions to the Final Exam in Math 1111—Chapter 3

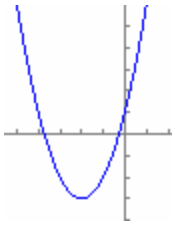
Section 3.1: Quadratic Functions

1. Find the quadratic function shown on the graph.



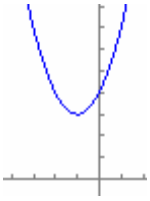
a. $f(x)=(x-2)^2+3$ *b.* $f(x)=-x^2+3$ *c.* $f(x)=-(x-2)^2+3$ *d.* $f(x)=-(x+2)^2+3$ *e.* None of these

2. Match the function to its graph.



a. $f(x)=(x-2)^2-3$ *b.* $f(x)=-(x+2)^2-3$ *c.* $f(x)=(x+2)^2-3$ *d.* $f(x)=-(x+2)^2+3$ *e.* None of these

3. The vertex of the given graph is (-1,3). Find the correct function of the graph.



a. $f(x)=x^2-2x+4$ *b.* $f(x)=x^2+2x+4$ *c.* $f(x)=x^2+2x-4$ *d.* $f(x)=x^2+4$ *e.* None of these

4. Find the x-intercepts of the function $2x^2+2x-12$.

a. {-3,0} *b.* $\{0,2\}$ *c.* $\{-3,2\}$ *d.* $\{-3,0,2\}$ *e.* None of these

Section 3.2: Polynomials of Higher Degree Than 2.

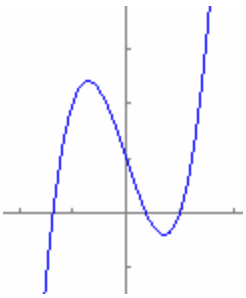
1. Find all the real zeros of the polynomial function: $f(x)=x^3-4x^2-25x+100$.

a. {4,5,-5} *b.* $\{-4,5,-5\}$ *c.* $\{-4,4,5,-5\}$ *d.* $\{-4,4,5\}$ *e.* None of these

2. Find all the real zeros of the polynomial function: $f(x)=x(x^2+1)(x-3)$.

a. {0,3} *b.* $\{0,-1,-3\}$ *c.* $\{0,3,-3\}$ *d.* $\{0,-1,1,3\}$ *e.* None of these

3. Which is the correct equation for the following graph?



a. $f(x)=-2x+3$ *b.* $f(x)=x^2-4x$ *c.* $f(x)=2x^3-3x+1$ *d.* $f(x)=x^4+2x^3$ *e.* None of these