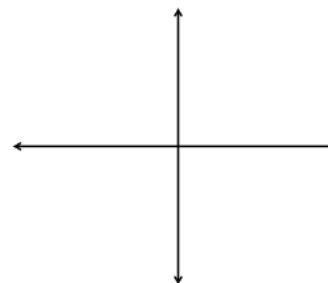


*Objectives:

Got It? 1. What is the factored form of $x^3 - x^2 - 12x$?

*Roots, Zeros, and x-intercepts

Got It? 2. What are the zeros of $y = x(x - 3)(x + 5)$? Graph the function.



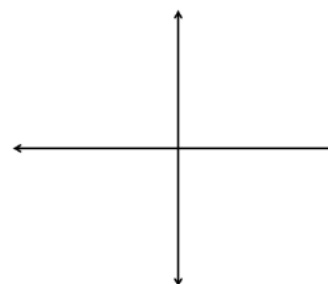
*The Factor Theorem

Got It? 3. **a.** What is a quadratic polynomial function with zeros 3 and -3 ?
b. What is a cubic polynomial function with zeros 3, 3, and -3 ?

“A zero a of multiplicity n ” means that $x - a$ appears n times as a factor.

*How Multiple Zeros Affect a Graph		
Linear	Quadratic	Cubic

Got It? 4. What are the zeros of $f(x) = x^3 - 4x^2 + 4x$?
What are their multiplicities? How does the graph behave at these zeros?



*Relative Maximum and Minimum (p. 291)

Inclass: p. 293 #8, 18, 22, 32

Homework: p. 293 #7-33(odd)

Interactmath: #9, 16, 23, 30, 32