Chapter 11 – Section 11.3 The Short-run Behavior of Polynomials

TICKET-IN-THE-DOOR

In order to be prepared for class you must watch the module and complete the following activity. This is due first thing when you get to class.

State the **Zero Product Rule**

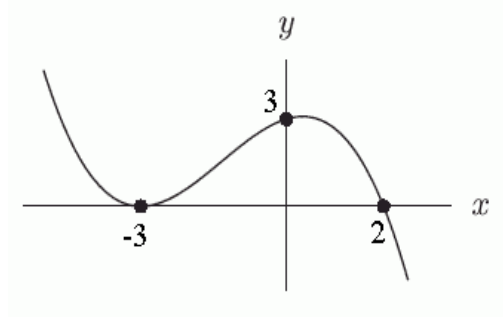Check your understanding:
1. Find the **zeros** for each of the following functions.
   a. $y = x^3 + 7x^2 + 12x$

   b. $y = (x^2 + 2x - 7)(x^3 + 4x^2 - 21x)$

   c. $y = 5(x - 2)(x^2 - 16)(x + 5)$

2. Write a possible **formula** for the polynomial graph shown below.

3. Find a possible **formula** for each polynomial with the given properties
   a. f has degree ≤ 2 and $f(0) = 0$ and $f(1) = 1$.

   b. f has degree ≤ 2 and $f(0) = f(1) = f(2) = 1$.

   c. f is a <u>third degree</u> polynomial with $f(-3) = 0$, $f(1) = 0$, $f(4) = 0$, and $f(2) = 5$.

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