How Can I Use the Graph of a Polynomial to Factor and Solve the Function?

First of all, it’s very important to remember that the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the graph are the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the function. These will also be referred to as \_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. They all mean the same thing!

Secondly, you must learn and apply the **Zero Product Property** which states

**If a·b = 0, then a = 0 or b = 0**

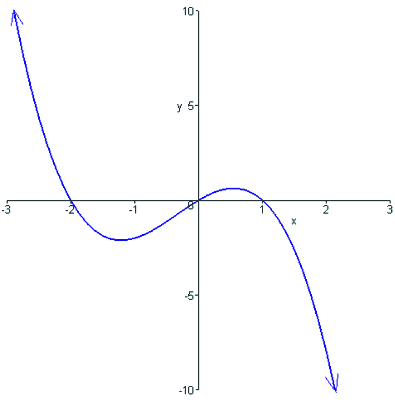
EX 1: Solve (x + 3)(x – 5) = 0 EX 2: (2x + 1)(6x – 7) = 0

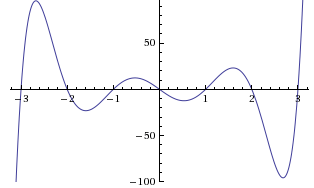
EX 3: 4x(x + 6) = 0 EX 4: 9x2 – 25 = 0

EX 5: x2 + 7x + 10 = 0 EX 6: 3x2 – 12 = 0

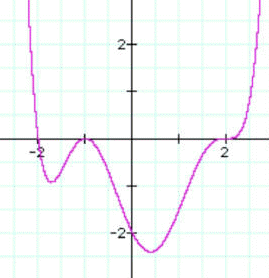
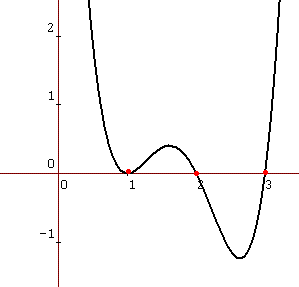
Let’s see what role the graph of the polynomial plays. . .

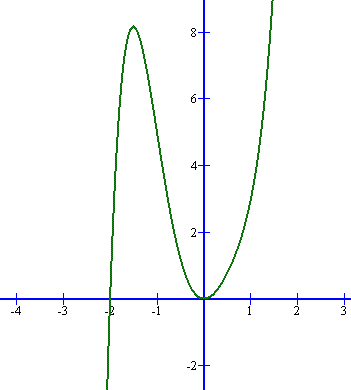
EX 1 EX 2





EX 3 EX 4



**EX 5**