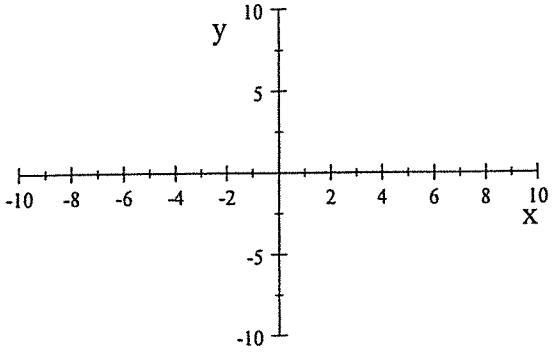
Alg 2A Shapes of Zeros Exploration Spring 2017

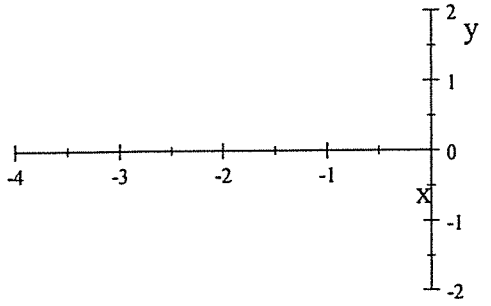
1. Graph $y = (x-1)(x+2)^2$ in a Standard Window and sketch it below:



2. Investigate the graph around each zero

Around -2: This zero comes from the factor $(x+2)^2$

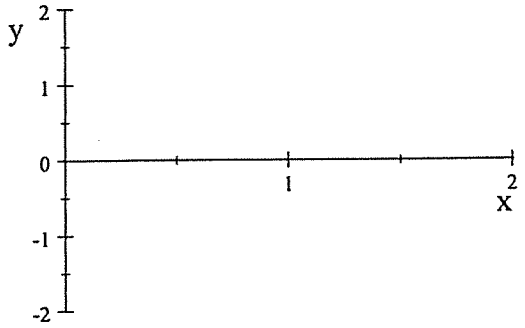
Use the following window: $x : [-4,0]$ & $y : [-2,2]$ Sketch the graph below:



Describe what the graph looks like in this window.

Around 1: This zero comes from the factor $(x-1)$

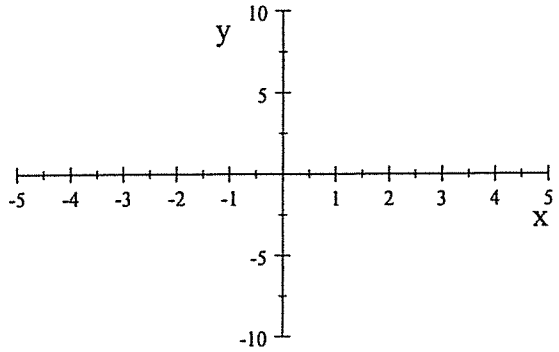
Use the following window: $x : [0,2]$ & $y : [-2,2]$ Sketch the graph below:



Describe what the graph looks like in this window.

3. Graph $y = (x+1)^3(x-2)$ in the following window and sketch it below:

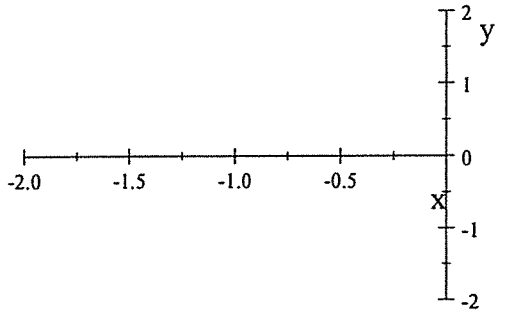
Window: $x : [-5,5]$ & $y : [-10,10]$



4. Investigate the graph around each zero

Around -1:: This zero comes from the factor $(x+1)^3$

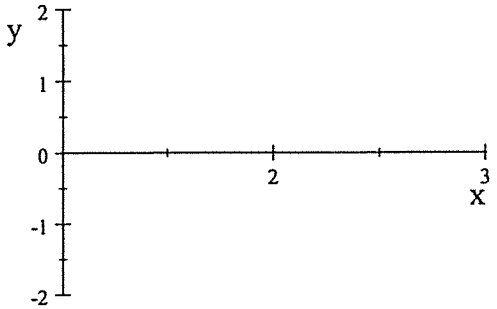
Use the following window: $x : [-2,0]$ & $y : [-2,2]$ Sketch the graph below:



Describe what the graph looks like in this window.

Around 2: This zero comes from the factor $(x-2)$

Use the following window: $x : [1,3]$ & $y : [-2,2]$ Sketch the graph below:



Describe what the graph looks like in this window.