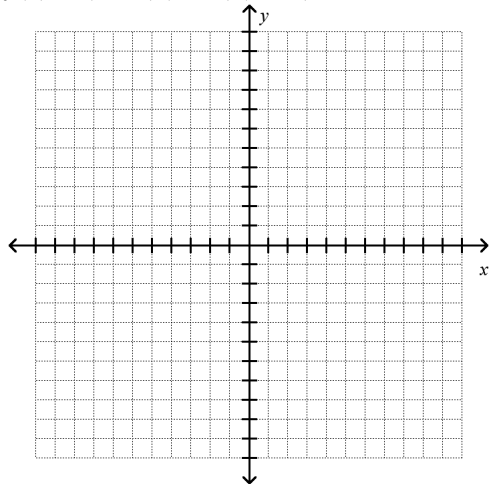


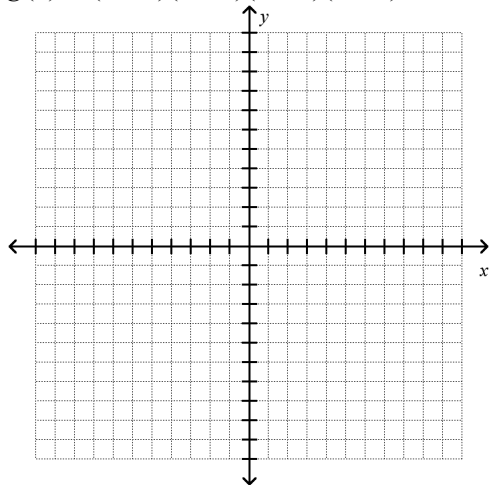
Graphing Polynomials in factored form

Identify the zeros of each polynomial function.
Use Desmos to graph each polynomial.

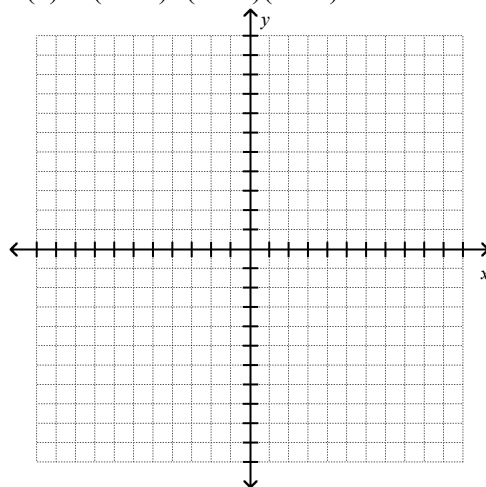
1. $f(x) = (x - 3)(x + 3)(x - 1)$



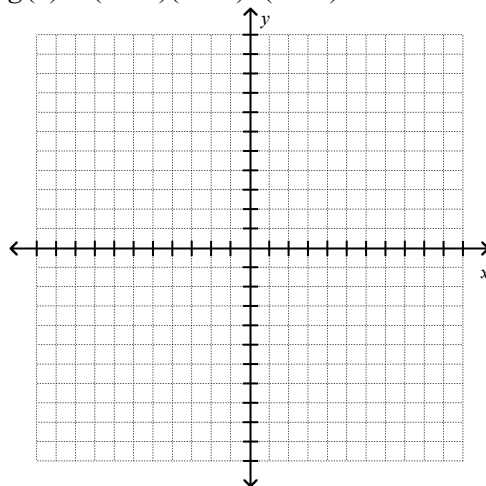
2. $g(x) = (x - 4)(x - 5)(x + 2)(x + 3)$



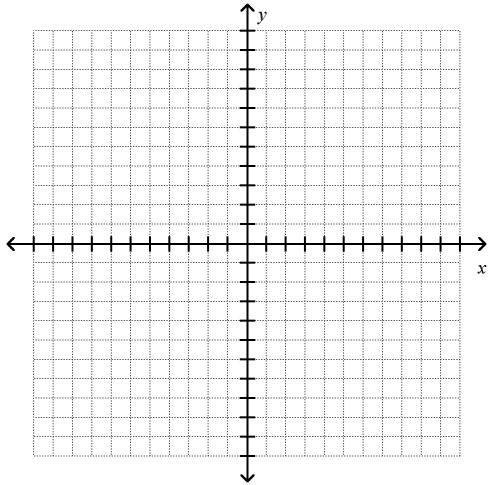
3. $h(x) = (x + 3)^2(x - 1)(x - 5)$



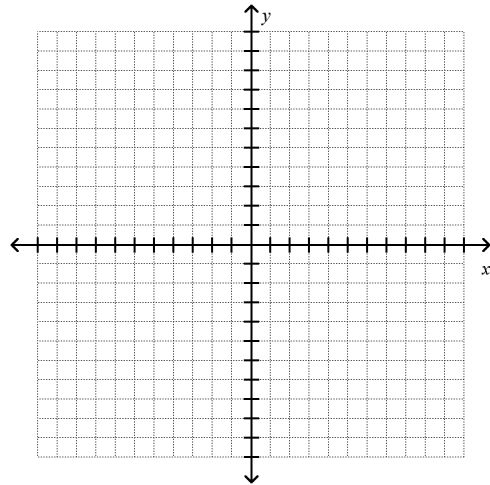
4. $g(x) = (x - 2)(x + 2)^3(x + 6)$



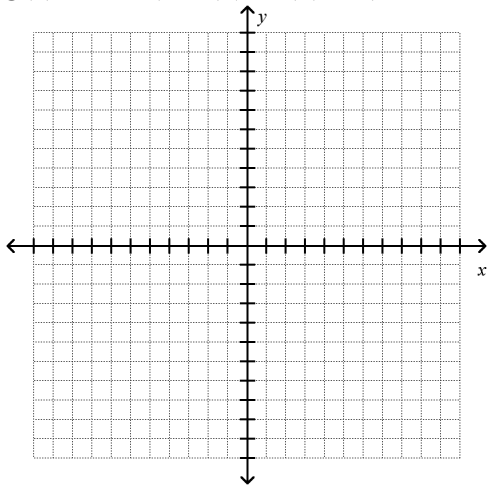
5. $g(x) = -3x(x-1)(x-4)(x+2)$



8. $g(x) = -(x+4)^3(x-3)(x+2)$



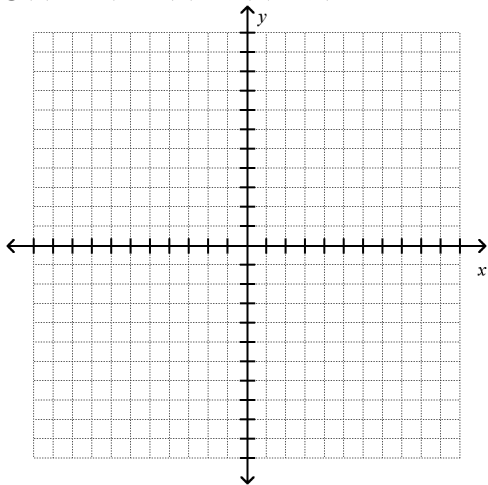
6. $g(x) = -2x^2(x-2)(x-7)(x+1)$



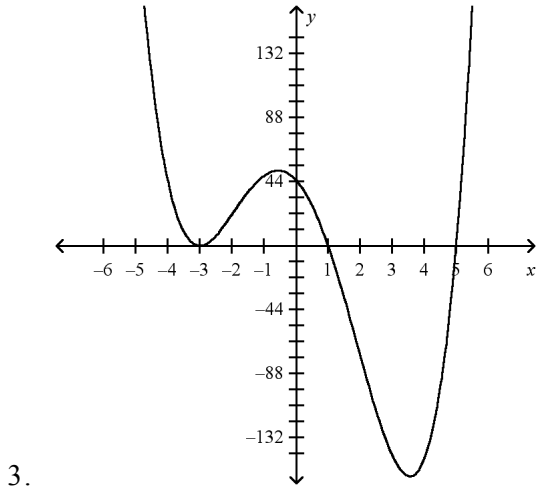
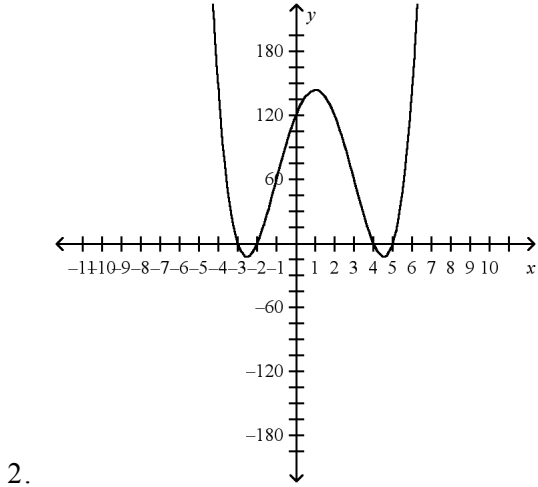
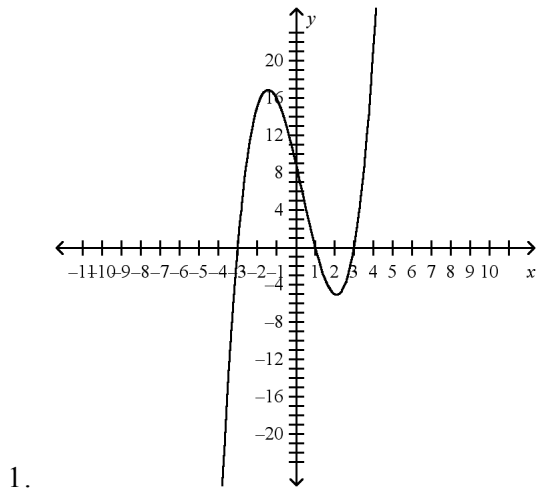
9. What do you notice about how the graph behaves at the zeros?

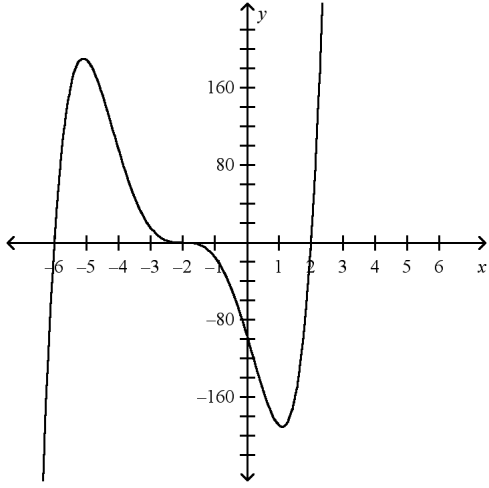
Is it different if the zero is squared or cubed?

7. $g(x) = -(x+5)(x-9)(x+1)$

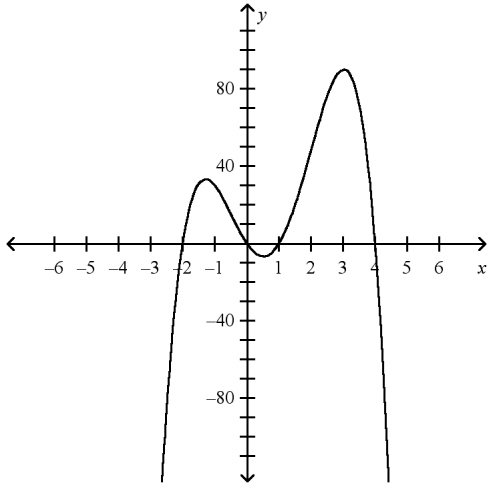


Graphing Polynomials in factored form
Answer Section

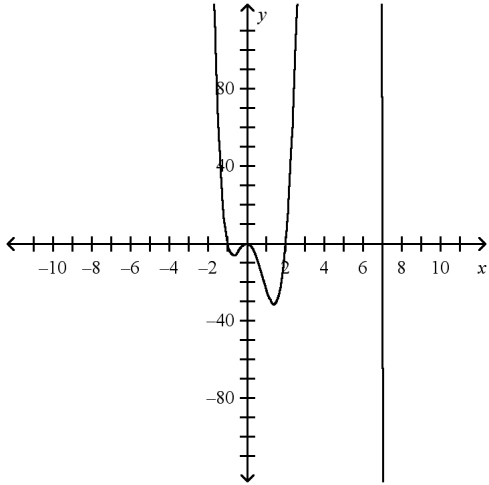




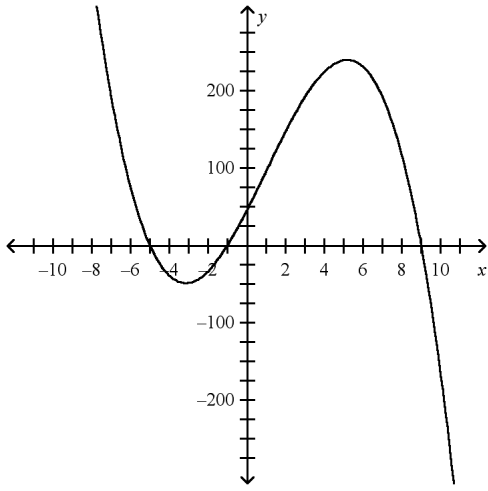
4.



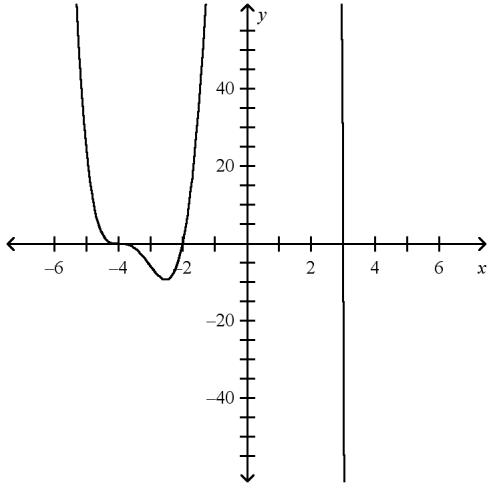
5.



6.



7.



8.

9. It passes through the single zeros, bounces off the squared ones and curves through the cubed ones