Sketching the Derivative

1. Graph the continuous function $f\left(x\right)=x^{3}-12x+9$ over the domain [-5, 5] using your calculator.
Adjust your window appropriately. Make an accurate sketch on graph paper.

2. Use your calculator to determine the slope at various points on $f\left(x\right)$. Plot these points, both on graph paper and on your calculator.

3. Use regression, or some other method to determine the equation of $f^{'}(x)$.

4. Use the power rule to determine the equation of $f^{'}(x)$.

5. Make an accurate graph of $f^{'}(x)$. Note any important features of $f\left(x\right)$ and $f^{'}(x)$.