Ex/ $-x + 9x^2 - 8x^3 \geq 0$

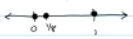
$-8x^3 + 9x^2 - x \geq 0$

$8x^3 - 9x^2 + x \leq 0$

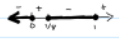
$x(8x^2 - 9x + 1) \leq 0$

$x(8x-1)(x-1) = 0$

Roots: $0, \frac{1}{8}, 1$



TV	x	(8x-1)	(x-1)	y
-100	−	−	−	−
1/10	+	−	−	+
1/2	+	+	−	−
100	+	+	+	+

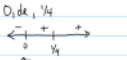


$\{x: x \leq 0 \cup \frac{1}{8} \leq x \leq 1\}$

Think about the graphs of the equations from the last two examples. How would they look on a coordinate plane? Use the signs of the y values to determine how the curve would appear. Keep in mind the curve changes from one sign to another when it crosses the x-axis.

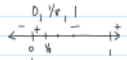
$8x^3 - 2x^2 = 0$

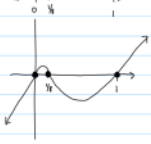
Roots: $0, \frac{1}{4}$



$8x^3 - 9x^2 + x = 0$

Roots: $0, \frac{1}{8}, 1$





Take a look at the excel document on Moodle. It shows the graphs of these two functions. Think about the impact a double root has on the graph of a function.