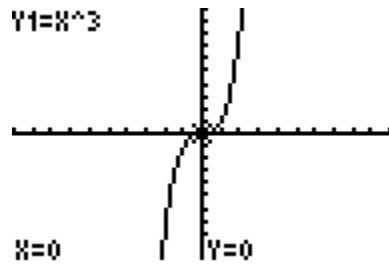
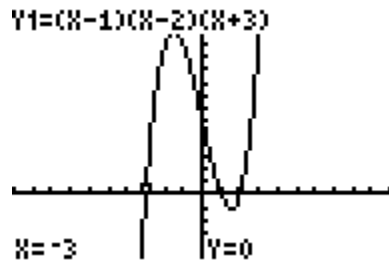


# Cubic Functions and Roots

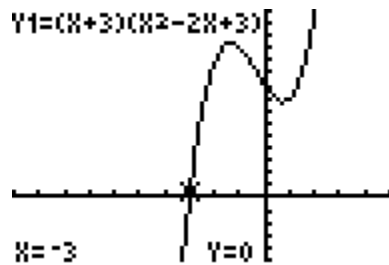
## Positive



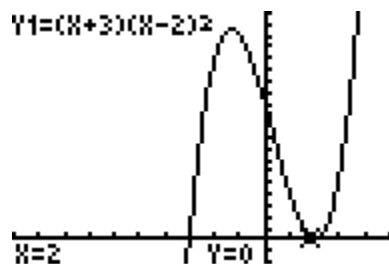
**3 equal real roots**  
"wave"



**3 different real roots**

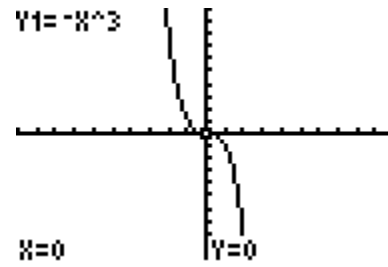


**1 real root**  
**2 non real roots**

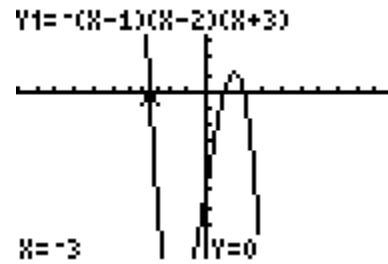


**1 real root**  
**2 equal real roots**

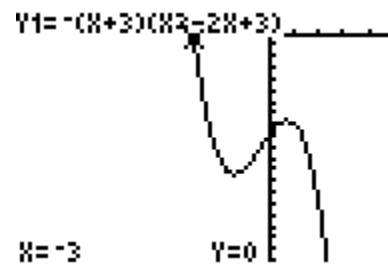
## Negative



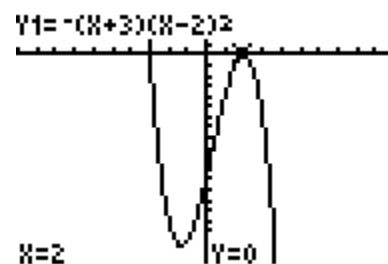
**3 equal real roots**  
"wave"



**3 different real roots**



**1 real root**  
**2 non real roots**



**1 real root**  
**2 equal real roots**