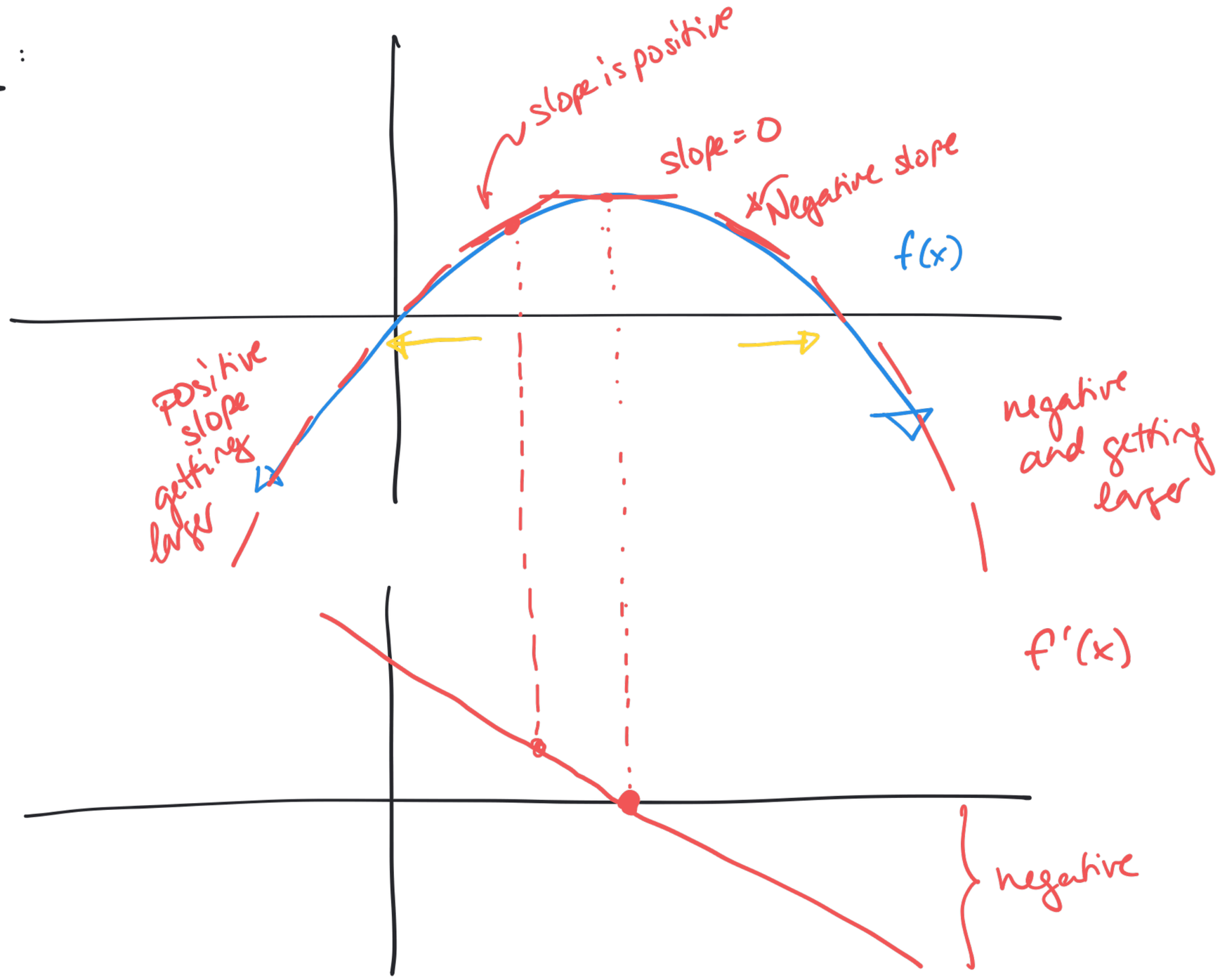
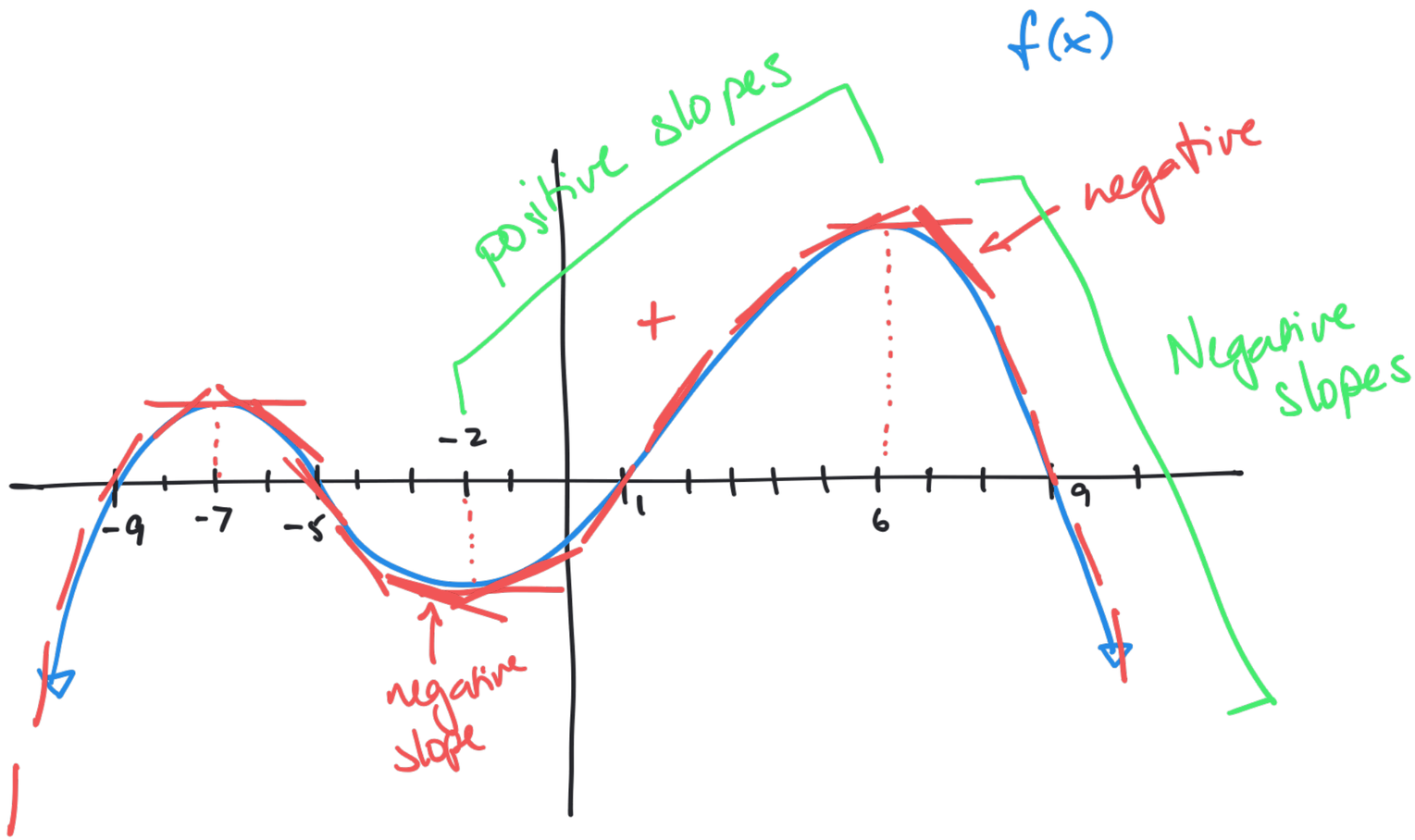
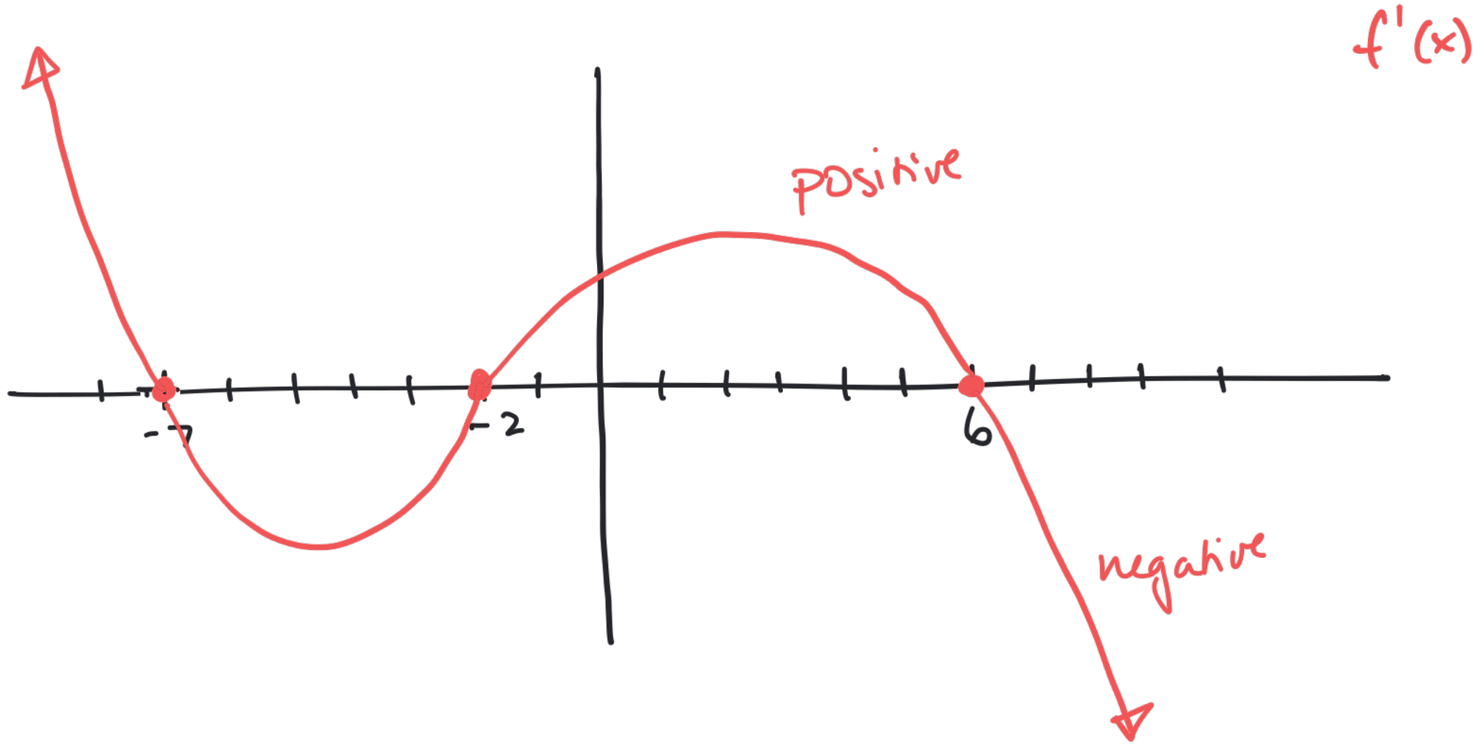
Intro Video: Section 2.8 graphical differentiation

Math F251X: Calculus I

Example :

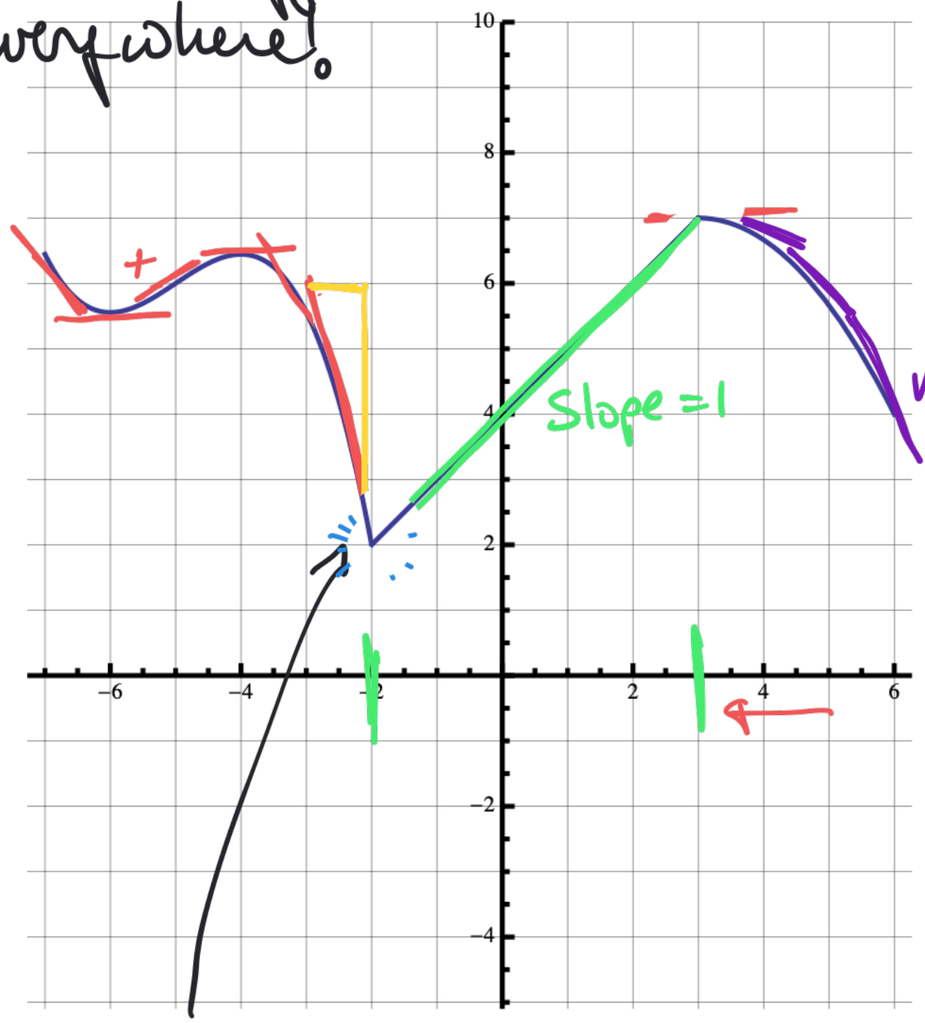

slope is positive
slope = 0
Negative slope
f(x)
positive slope getting larger
negative and getting larger
f'(x)
negative


f(x)
positive slopes
negative
Negative slopes
+
-2
-9
-7
-5
1
6
9
negative slope


f'(x)
positive
negative
-7
-2
6

This function is continuous!
But not differentiable everywhere.

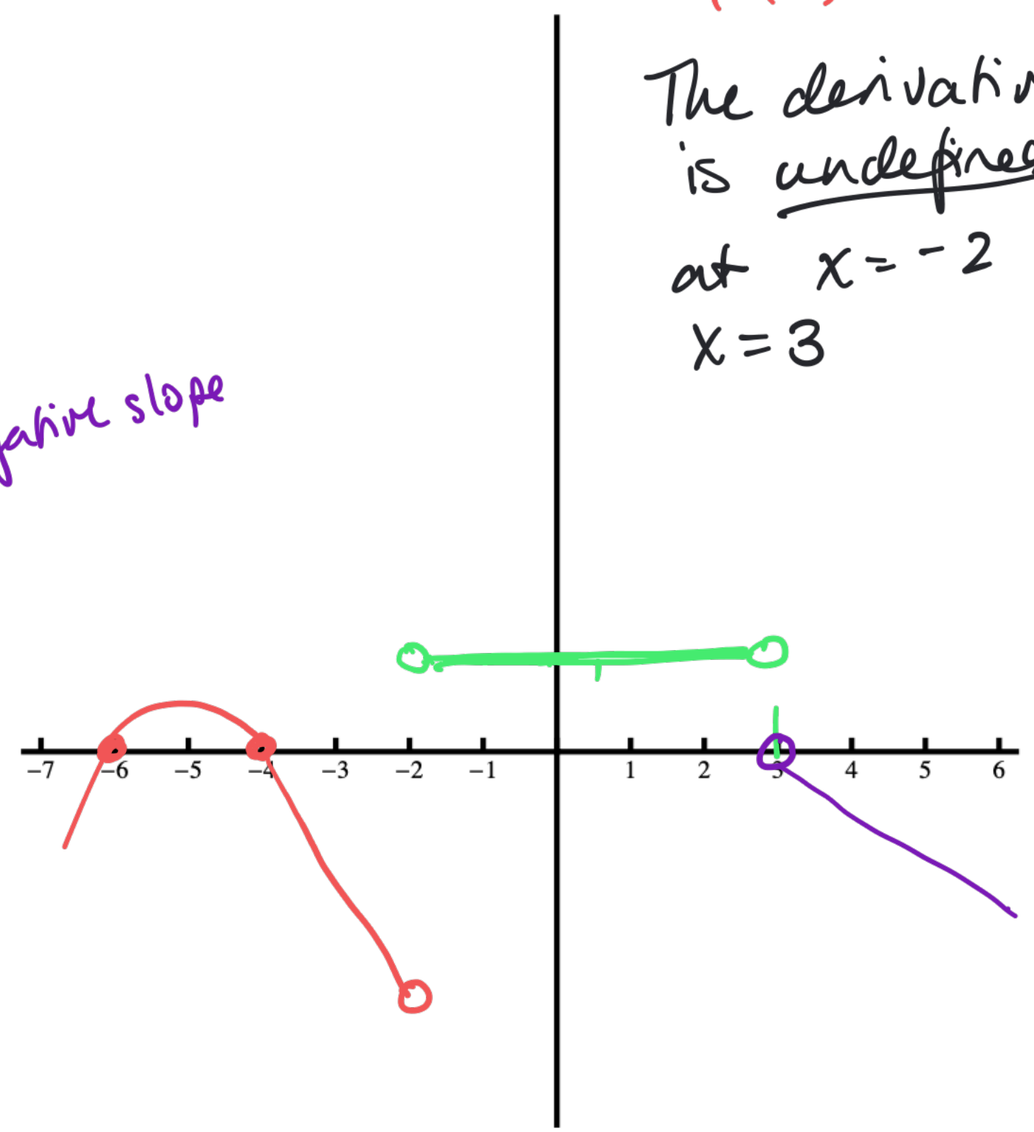
f(x)

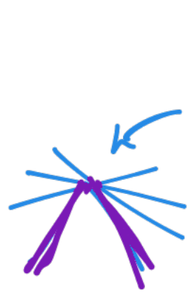


A corner!

f'(x)

The derivative is undefined at $x = -2$ and $x = 3$





No tangent line at a corner!
No way to determine the slope!