HW 6: Section 2.1

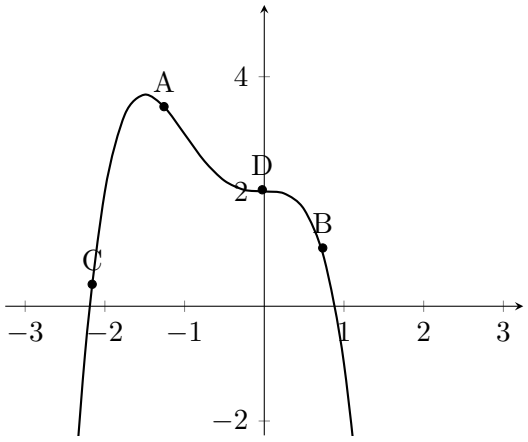
Due: Monday, September 23rd in SQRC by 9pm

Learning Goals:

- Find the slope of a tangent line to a curve using a limit.
- Find the equation of the tangent line to a curve.

Questions:

1. Find the equation of the tangent line to the curve $y = x^2 - 2$ at $x = 1$.
2. Problem 2.1.2. Find the equation of the tangent line to the curve $y = x^2 - 2$ at $x = 0$.
3. Problem 2.1.4. Find the equation of the tangent line to the curve $y = x^3 + x$ at $x = 1$.
4. Problem 2.1.6. Find the equation of the tangent line to the curve $y = \frac{x}{x-1}$ at $x = 2$.
5. Problem 2.1.14 List the points A, B, C, D in order of increasing slope of the tangent line.



6. Problem 2.1.42. See the book.