

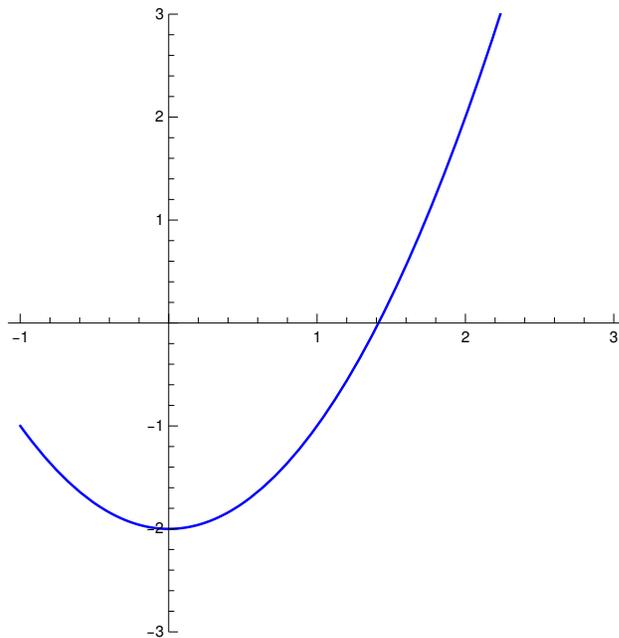
INTRODUCTION TO CALCULUS

MATH 1A

UNIT 21: WORKSHEET

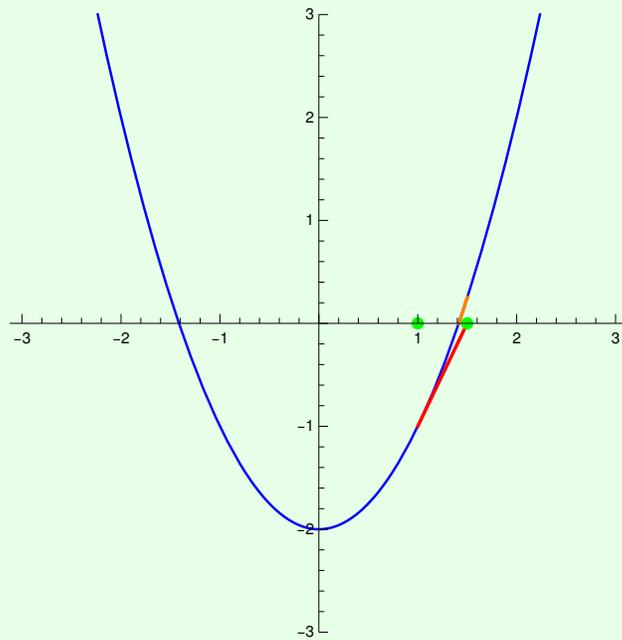
Finding roots

Problem 1: In the following graph $y = x^2 - 2$ trace a Newton step starting at $x = 1.0$.



Problem 2: Now do a second step!

Solution:



Problem 3: Illustrate the mean value theorem, the intermediate value theorem and Rolle's theorem with a picture.

Solution:

It is a good idea to have visual pictograms for theorems. We have seen the

- Extreme value theorem
- The intermediate value theorem
- Rolle's theorem
- The mean value theorem