

# MTH 111 Course Notebook Desmos Activities

## CHAPTER 1

Activity:

- 1.4 Basic Polynomial Functions: Sorting their Graphs  
<https://teacher.desmos.com/activitybuilder/custom/5b0b283b92d0f7682fc959c1>

Course Notebook links:

- 1.5 Exponential parent functions  
<https://www.desmos.com/calculator/vwzxrln9v0>
- 1.5 Logarithmic parent functions  
<https://www.desmos.com/calculator/d2ckalocvu>
- 1.6 H.A. of rational parent functions  
<https://www.desmos.com/calculator/wkx6dbij7g>
- 1.6 V.A. of rational parent functions  
<https://www.desmos.com/calculator/oa6sqychy1>

## CHAPTER 2

Activity:

- 2.3 Sorting Graphs of Polynomials  
<https://teacher.desmos.com/activitybuilder/custom/5b14262ee66b1e0a77a350f4>

## CHAPTER 3

Activity:

- 3.1 Transformations of Functions:  
<https://teacher.desmos.com/activitybuilder/custom/5b536d7e283dc116c5def12a>

## CHAPTER 4

Course Notebook link:

- 4.3 Leading Term and End Behavior of Polynomial Functions  
<https://www.desmos.com/calculator/jzb4eycolq>
- Wrap-up: Gender Wage Gap models  
<https://www.desmos.com/calculator/ohzgha9414>

## CHAPTER 5

Instructor demonstration:

- 5.1: Graph of ball thrown straight up (standard, factored and vertex form of a quadratic)  
<https://www.desmos.com/calculator/aovdn90adv>

Instructor demonstration:

- 5.1: Vertex Form  
<https://www.desmos.com/calculator/naevfljlym>

Course Notebook link:

- 5.2: Multiplicities of Zeros  
<https://www.desmos.com/calculator/9ytpnfyg9f>

Activity:

- 5.3A: Rational Functions: Zeros, Vertical Asymptotes and Domain  
<https://teacher.desmos.com/activitybuilder/custom/5b57923cb0e57c19f892ba58>

Course Notebook link:

- 5.3B: End Behavior of a Rational Function  
<https://www.desmos.com/calculator/m3nb3jh4l2>

## CHAPTER 6

Instructor demonstration:

- 6.2: Domain of a composition (Laverna and Genty problem)  
<https://www.desmos.com/calculator/kxotgxvtuw>

## CHAPTER 7

Course Notebook link:

- 7.3: Extraneous solutions of a logarithmic equation  
<https://www.desmos.com/calculator/aqete33dmc>