AP Calc Roller Coaster Project Name: \_\_\_\_\_\_\_\_

Concept: Continuous piecewise functions

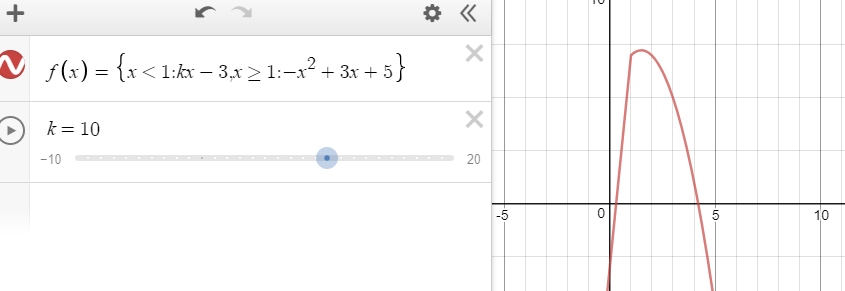
Consider the piecewise functions

Prove that this function is continuous at x = -3

Now consider the piecewise function

State the value of k to make this function continuous.

Did you get k = 10



You get the idea of “making a piecewise function continuous”

Project: Design a roller coaster piecewise function with animation in desmos.com

Requirement: The wagon starts from ground, goes up then starts to fall. At least 1 big fall and 1 small fall (make sure your wagon have enough potential energy to complete its route). Underground and/or 360o loop is a plus.