

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Activity 1: Graphing Total Revenues

Instructions: Graph the total revenue function,  $TR = 10Q - Q^2$  using an online graphing tool (<http://www.meta-calculator.com/>) Click on the link to open the online graphing tool webpage and then click on “Graphing Calculator” link. On the graphing calculator page (see figure below), enter the function into box 1 of the graphing calculator. (Hint: use the letter “x” instead of “Q” to enter the function in box 1.) To restrict the revenue function to only the positive quadrant, enter the following ranges for the x axis and the y axis in the boxes under box 1. Set the minimum x value as 0 and the maximum x value as 30. Then set the minimum y value as 0 and the maximum y value as 30. After entering the function, click the “Graph” button.

Enter function in this box

Enter minimum and maximum values for the x and y axes in these boxes

Click this button to graph function

## Activity 2: Constructing the Profit Function

Instructions: Construct the profit function based on the following total revenue function and total cost function. Show all work.

$$TR(Q) = 10Q - Q^2$$

$$TC(Q) = 2Q^3 - 4Q^2 + 4Q + 4.$$

$$\pi(Q) =$$