

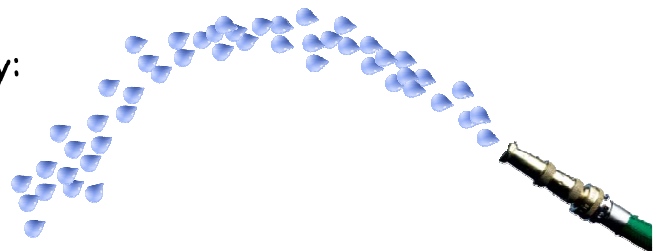
3.2 Creating a Quadratic model from Data ...Continued

1. Complete task from last day

2. Complete homework from last day:

Read page 170 Example 1

Do Investigate A-F, I-J



3. Practice:

page 177 # 2, 5, 6 find equation in std form using

DESMOS (instructions next page)

8 find equation in std form using graphing calc then use quad equation to make your prediction

9 find equation in std form using graphing calc then change to vertex form by completing the square to find the lowest point

12



Finding the equation using Desmos


Enter your table in Desmos by going to the Add item button and clicking the table



Find your Equation by typing the following after your table

standard form $y_1 \sim ax_1^2 + bx_1 + c$

You get y_1 by typing y then 1 similarly for x_1

You can find the \sim symbol by clicking  (they symbol is in the last row)

The R^2 represents how well the data fits the equation
The closer it is to 1 the better the fit

you will then see your a,b and c values:

$$y_1 \sim ax_1^2 + bx_1 + c$$

STATISTICS	RESIDUALS
$R^2=1$	e_1 <input type="button" value="plot"/>
PARAMETERS	
$a=1$	$b=0$
$c=0$	

we will not be discussing the residues at this time:

You can also find different forms of the equation:

vertex form
 $y_1 \sim a(x_1 - h)^2 + k$

factored form
 $y_1 \sim a(x_1 - r)(x_1 - s)$