**March Madness!**

**NCAA Tournament Investigation**

*The NCAA holds an annual basketball tournament. The top 68 teams in Division I qualify, but there are four pre-tournament games to narrow the field to 64 teams. When a team loses, it is out of the tournament.*

Answer the following questions using your own words and complete sentences. This is an individual assignment but you may discuss it with your neighbor. Be sure to show all work.

1. How many of the 64 teams are left in the tournament after the first round of basketball games?
2. Copy and complete the table until only one team is left. Graph the data on the grid. Draw, label and scale the x and y axis.

|  |  |
| --- | --- |
| After round(x) | # of teams left in tournament(y) |
| 0 | 64 |
| 1 |  |
| 2 |  |
|   |  |
|  |  |
|  |  |
|  |  |
|  |  |



1. What are the domain and range of the data; explain the relationship?
2. Does the graph represent a linear, quadratic, cubic or exponential function? How do you know?
3. How does the number of teams left in each round compare to the number of teams in the previous round?
4. Enter the data into a lists and spreadsheet page. Run a linear, quadratic, cubic and exponential regression. Which type of function is the best model for the data (list the r2 for each)? List the function.
5. Critique the activity on the back of the page. What did you like or dislike about this activity? Use complete sentences.