***MFM2P – Cup Stacking Class Work*** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. A group collects the following data for its stacked cups. Make a scatterplot and draw a line of best fit. Remember to label your axes.

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| # cups | Height (cm) |
| 1 | 8.5 |
| 2 | 10 |
| 3 | 11.5 |
| 4 | 12.5 |
| 5 | 14.0 |
| 6 | 15.5 |
| 7 | 16.5 |

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1. Determine the rate of change (“slope”) and y-intercept of your line of best fit, then build an equation connecting the number of cups to the stack height.
2. Use your equation to predict:
a) The height of 65 cups b) How many cups will reach 186 cm?
3. What does the cup look like?
Draw a picture, and include
any important measurements.