
Pokémath: Group Work 10

Names _____,



Revenue in the early days of GO!

We have intelligence from the Pokémon® Professor that Team Cyclone may be using their stolen Pokémon® to stage a heist on Niantic's vault! We need to know just how much money might be in there. We can use trendlines to investigate.

Today we will learn more about rates of change and create some linear models. Attached is an excel spreadsheet containing the data of the revenue from Pokémon® GO in the first thirty-two days following the launch of the game. The first few rows are shown below. This means that in the first day, Pokémon® GO made 3 million US dollars. On day 2, Pokemon GO made another 2 million US dollars for a cumulative revenue of 5 million dollars.

Day 1 is the US launch. Day 18 is the Japan launch. The data is approximated from mobileappdaily.com.

1) a) Compute the slope of total revenue from day 1 to day 17. This is also called the average rate of change of revenue from day 1 to day 17. **Include units.**

b) Create a linear model from day 1 to day 17. Use $y = mx + b$ form.

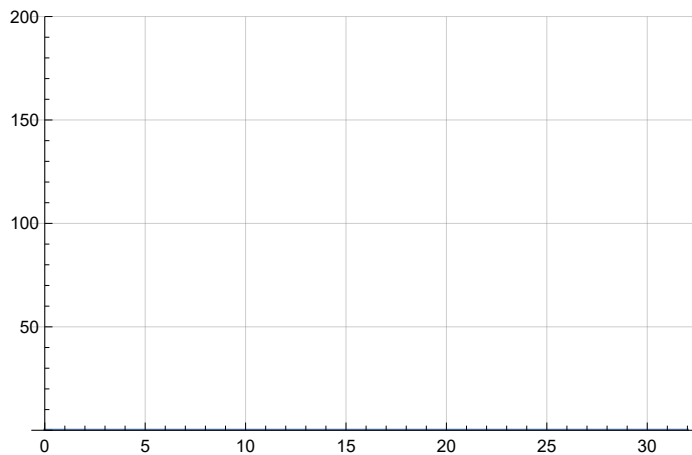
2) a) Compute the slope (average rate of change) of total revenue from day 18 to day 32. **Include units.**

b) Create a linear model ($y = mx + b$) for days 18-32.

3) a) Compute the slope (average rate of change) of total revenue over the entire 32 days.

b) Create a linear model ($y = mx + b$) for the entire 32 days.

4) a) Sketch your three linear models on the graph below. Make sure to label your axes and indicate which linear model is which.



5) a) Use Excel to create a scatterplot of the data. Then add a trendline to that plot. (Click your graph. Click Chart Design tab. Add Chart Element. Add Linear Trendline).

Excel also gives you the equation of the line. (Right click your trendline. Format Trendline. Display equation on chart).

What is the equation of the trendline given in Excel?

(b) Compare this trendline to your three linear models. How is it different or the same? Which of the four do you think fits the data best? Why?

6) It has been 2,472 days since Pokémon® GO released. Pick the line you think best fits the data. Based on that line, how much cumulative revenue has Pokémon® GO made since release up to today? Is this reasonable to be the cumulative revenue? Is that much money stored in Niantic's vault? What information would you need to get a better estimate of the money in the vault?