## Uncle Earl Day 2

1) Which of the options in Uncle Earl is linear? Explain how you know.
2) Describe the growth of the option that is not linear. How does it grow differently from the linear option?
3) Write an equation for each option where $\mathbf{x}$ is the \# of days and $\mathbf{y}$ is the amount of money after that many days.

## Choose ONE of these to explore.

1. If you started Option A with a penny instead, how long would it take for it to be the better choice?
2. In Option B, what if Uncle Earl had given you $\$ 1,000,000$ to start with and then $\$ 5,000,000$ more every day? Without doing any math yet, predict when you think Option A would pass Option B. Then check your guess.
3. Create a scenario similar to Option A and Option B in which Option A passes Option B on day 35.
4. For Option A, instead of doubling your money every day, what if Uncle Earl had only increased your money by $50 \%$ every day? In this scenario, how long would it take to pass Option B (the original version of Option B)?
