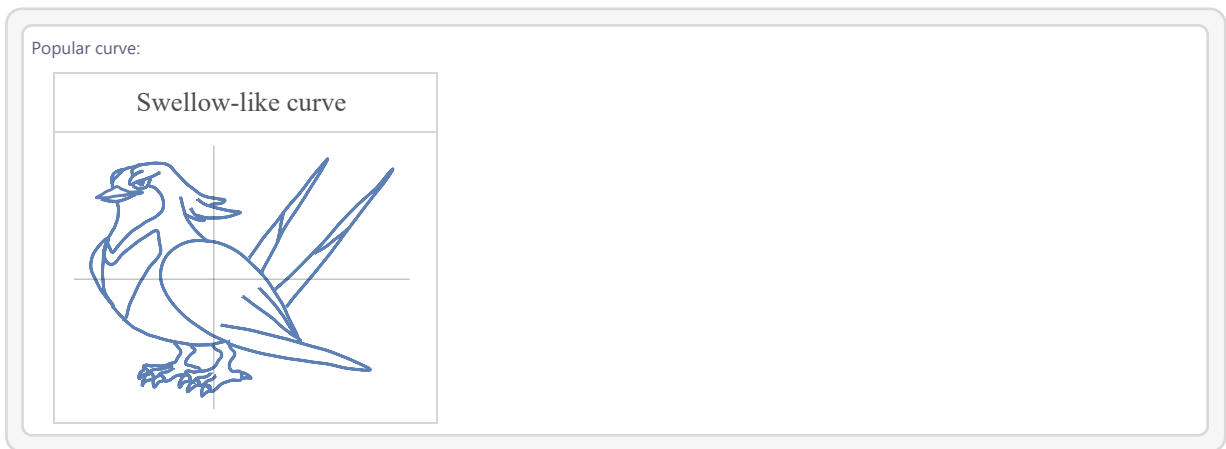


Pokémath: Homework 9



Pokémon® Problems

- 1) To win a Pokémon® GO battle you're going to need to use charged attacks, and to use charged attacks you're going to need energy. So let's do some energy calculations! Suppose you have a Swellow with the Fast move Steel Wing and the Charged Move Aerial Ace.
 - a) How much energy is required for Swellow to use Aerial Ace?
 - b) How much energy does each Steel Wing attack generate?
 - c) How many Steel Wing attacks does Swellow need to complete to charge up Aerial Ace?
- 2) Recall that battles in Pokémon® GO are secretly turn-based, with each turn lasting 0.5 seconds.
 - a) How many turns are required for Swellow to perform Steel Wing?
 - b) What is the average energy per turn generated by Steel Wing?
 - c) How many turns are needed for Swellow to charge up Aerial Ace?
- 3) Compute the TOTAL energy Swellow has on turns 1, 2, 3, 4, 5, 6.
- 4) What is the rate of change/slope of the total energy Swellow has?

5) Let's say $S(t)$ is a function representing the energy Swellow has stored at turn "t" of a battle. Graph $S(t)$ assuming Swellow uses Aerial Ace as soon as it is charged. Don't forget to label the axes! Hint: $S(t)$ is not a line. It will look like the staircase graphs from the in-class notes.

