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# Fall 2021 Precalc Lesson 14.1

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20 December 2021

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## Do now

**be sure to:** take a seat at your computer, next to your partner. Get out your **binder**. Copy the **goal** and read the information below. Open the **Sam the Butterfly Starter File** on **Google Classroom**. Answer the questions below in your notes.:

1. Describe what happens when this program runs.
2. What do you notice when Sam is located at coordinates (0,0)?
3. How far across the screen can Sam go? Answer with an inequality.  
Answer for both the left and right directions.
4. There are three functions in this program. How do they work? How do you think they are supposed to work.



**class:** precalc **goal:** HDW use inequalities in Pyret to keep your character on screen?



## B24 rules

Welcome to our new room, B24! Please read the information below:

1. When you come in, please find a seat at a desk (if one's available) or one of the **six** closest desks to the screen. **Do not sit in the back of the classroom.** We'll conduct the do now and mini lesson from here.
2. When I dismiss you for independent work, find a sit at one of the computer workstations.
3. **No food or drink by the computers.**
4. At the end of the period, you'll be directed to assemble for the exit ticket/debrief. Log out of your computer, and **quietly** return to a seat near the front.



## framing

- **what:** use inequalities in Pyret to keep your character on screen
- **why:** we want our images to move around but not too far!
- **where to:** finish our game this week



## Coding to learn: activity

Be sure to:

1. Fix the functions in **Sam the Butterfly** so they work correctly.
2. Open your saved video game file. Answer the questions below in your notebook:
  - A. Describe how the code in this file is similar to the Sam the Butterfly file.
  - B. What are your **TARGET** and **DANGER** doing right now? How could we change them, along the same lines as with Sam the Butterfly?
3. Fix the `is-safe-left()`, `is-safe-right()` and `is-onscreen()` functions so they keep the **TARGET** and **DANGER** on screen.



## Exit ticket

**Be sure to:** get out a sheet of loose leaf paper. Write your name and the date on top. Answer each question below with a complete sentence. Be prepared to hand in as you leave!

1. Describe how you changed your video game code today.
2. What mathematics did you use?
3. How would you like to change your game further?