Welcome to Section!

Week 2

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Agenda

1.

Check-In

How are we all doing?

2.

Section Problem

Another fun, challenging, and engaging Karel problem

3.

Bonus Problems

Expanding on Karel or diving into consoles!

Before We Start...

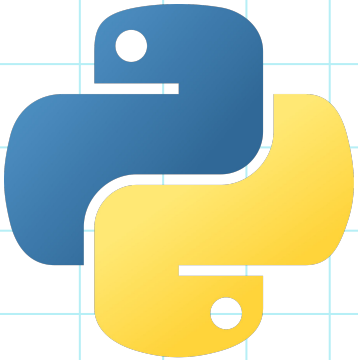
How are you all doing!? Hopefully your first week of CIP went well!

To start off section, let's do a quick check-in question.

Choose one of the following to answer:

- What's one thing you have enjoyed or found fun about CiP so far?
- What has been your favorite problem to work on so far?
- What are you looking forward to using Python/CS for?

A CIP student baked these!



Are there any questions?

Section Problem

Another Karel problem! This time, we want to do something that is algorithmically interesting and challenging. This is intended to be harder than last week's section problem!

Section Problem: Spread Beepers

Sample Starting World

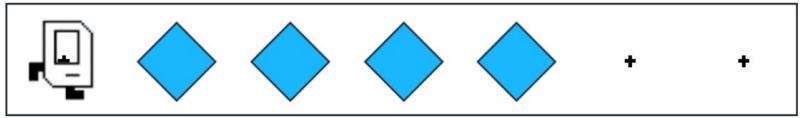
We have some amount of beepers which are stacked in a single pile.

Before:

Sample Output World

We want to take these beepers and spread them out across the row.

After:



(Notice how there are still only four beepers in the world!!!)

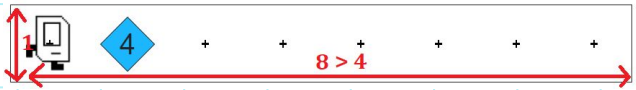
Key Problem Details

Beepers

The “catch” to this problem? Karel has infinite beepers in its bag

World Attributes

There is only one row in the world. The world is wide enough for all of the beepers



Locations

The pile of beepers is on the second column. (In front of where Karel starts.)

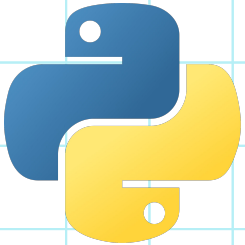
Are there any questions about the problem?

Let's code this up!

Would you all prefer to do this in breakout rooms or as a whole group?

What were your thoughts on the problem?

(Bonus)



Algorithmic Practice or Console Practice?

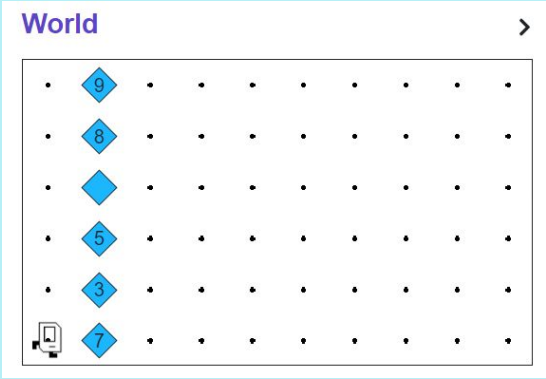
(Bonus)

Extending the Problem Even Further

What if we add more rows?

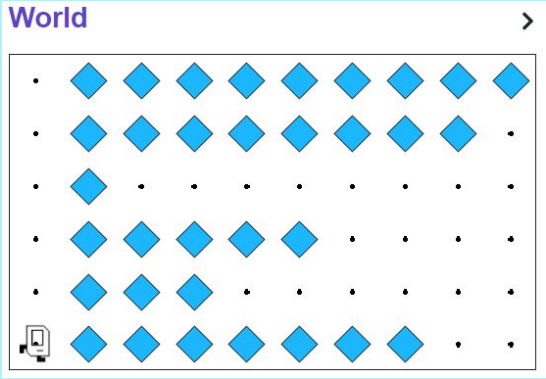
Sample Starting World

We have multiple rows with piles of beepers now!



Sample Output World

We want to spread all of the rows!



(Bonus)

Console Programming

Let's duplicate messages!

Sample Input

Enter any message you'd like:

↓

Enter any message you'd like: ***coding rocks!***

(User input is in bold italics)

Sample Output

coding rocks!
coding rocks!
coding rocks!
coding rocks!
coding rocks!
coding rocks!
coding rocks!
coding rocks!
coding rocks!
coding rocks!