

UNPLUGGED WORKSHEETS

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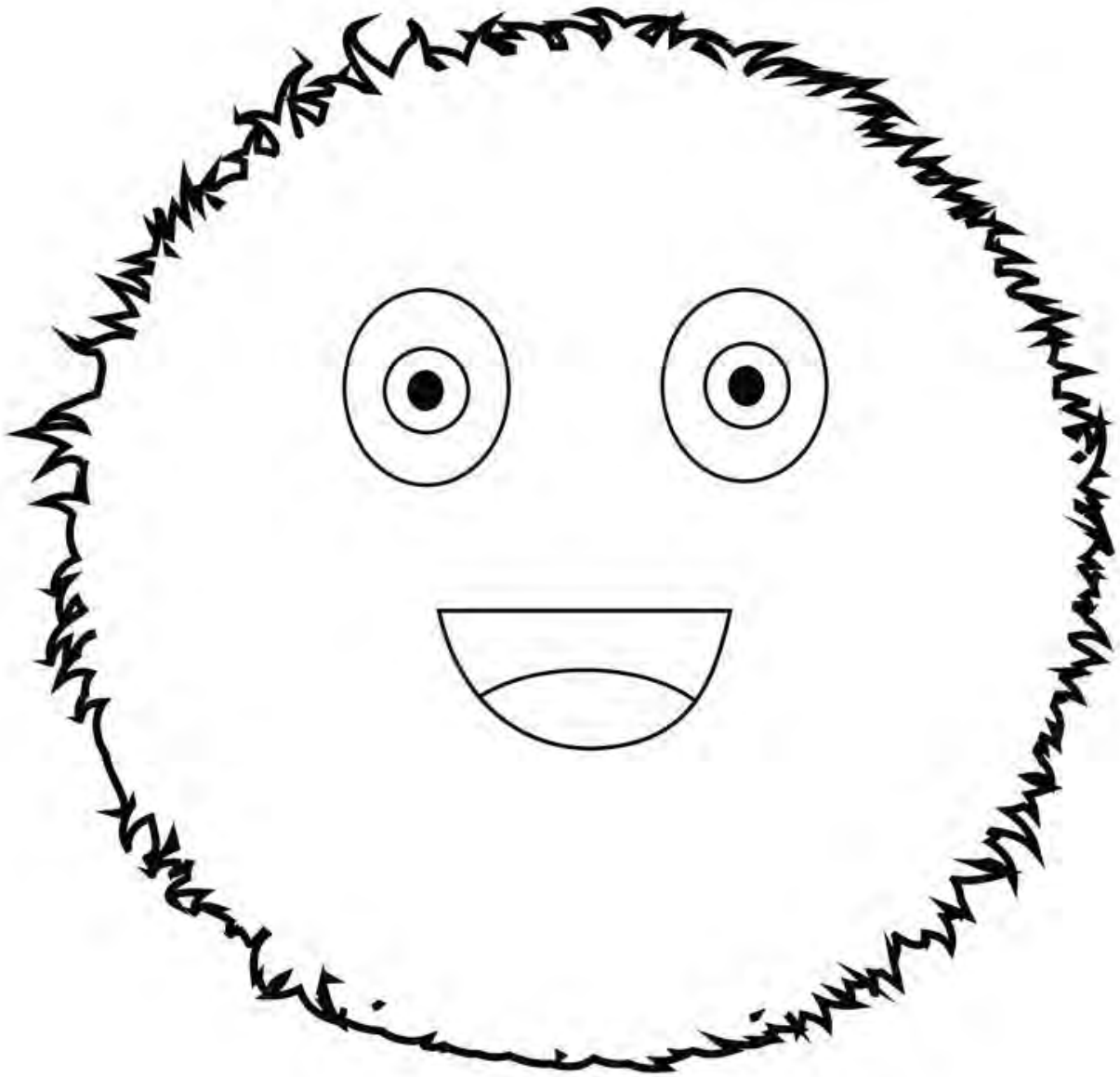
34 OBJECT-ORIENTED PROGRAMMING



Fuzz Builder

Your Name: _____

Directions: Create a new fuzz! Give it color and accessories.

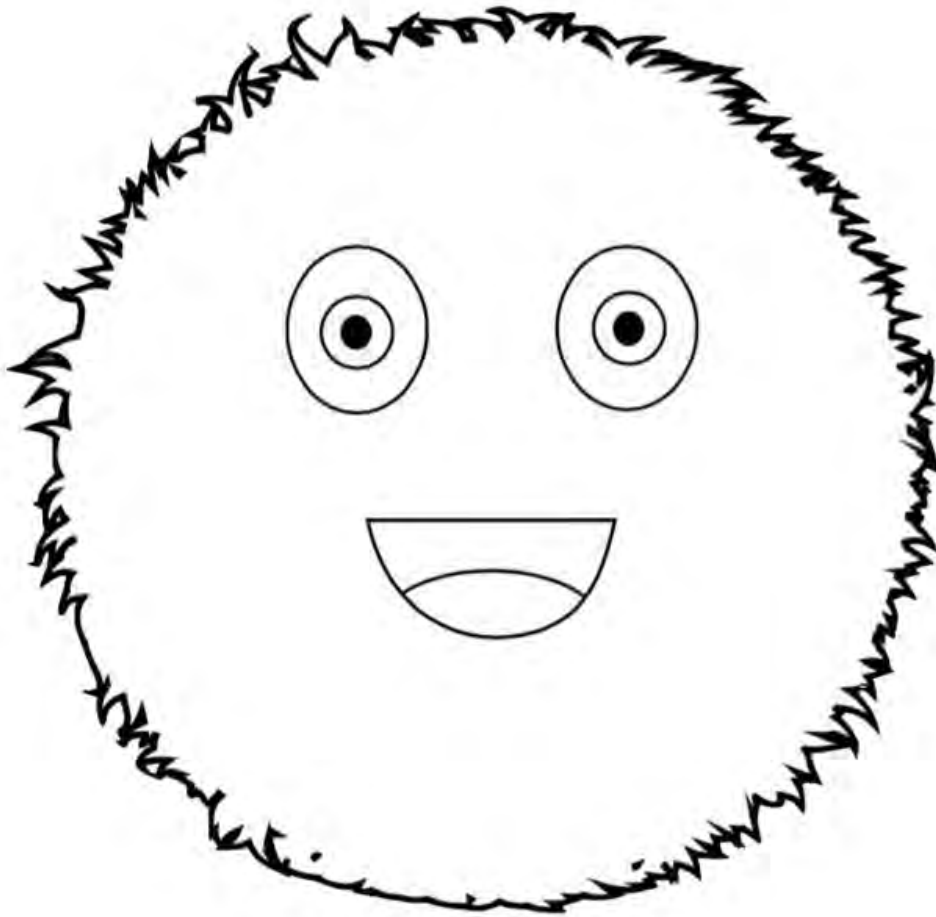


Give your fuzz a name too!

Fuzz Builder

Your Name: _____

Directions: Build a fuzz! Give it color and at least 1 accessories. Then, describe your fuzz's properties on the lines below.



Fuzz name: _____

Body Color: _____

Eye color: _____

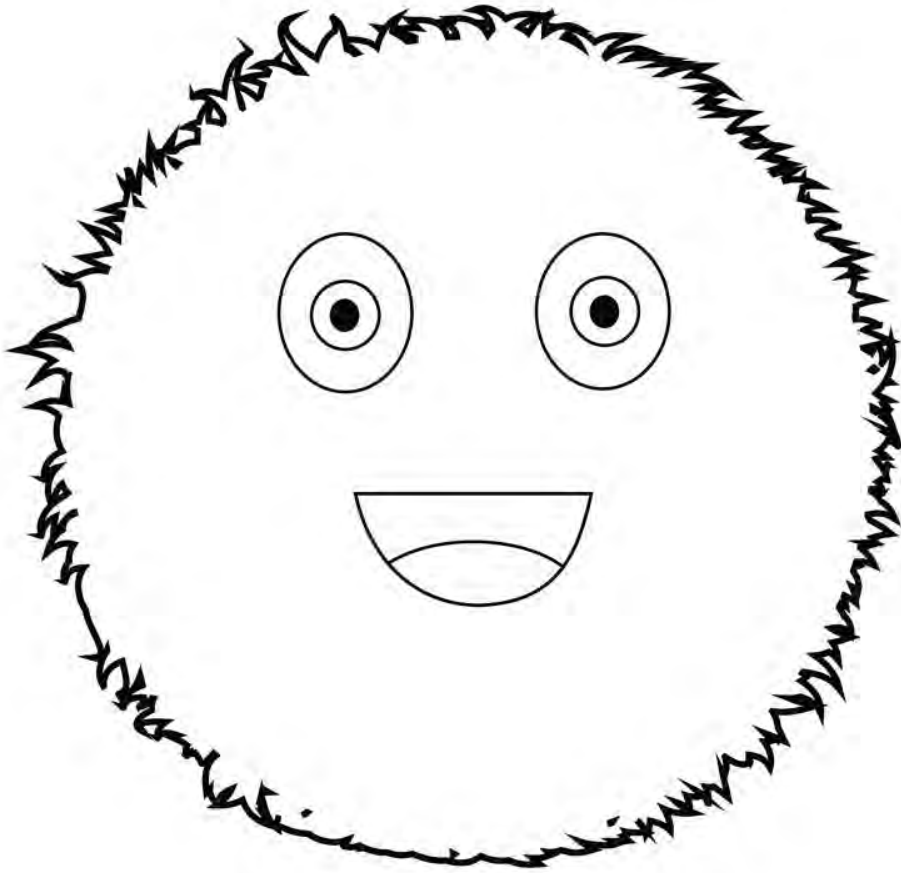
Accessories: _____

Fuzz Builder with JavaScript

Your Name: _____

Directions:

Build a fuzz! Give it color and at least 3 accessories. Get creative! Then, define it's properties in the JavaScript template below.



```
_____ = new Fuzz ( ) ;
```

```
fuzz.body = _____
```

```
fuzz.eyes = _____
```

```
fuzz.mouth = _____
```

```
fuzz.accessory1 = _____
```

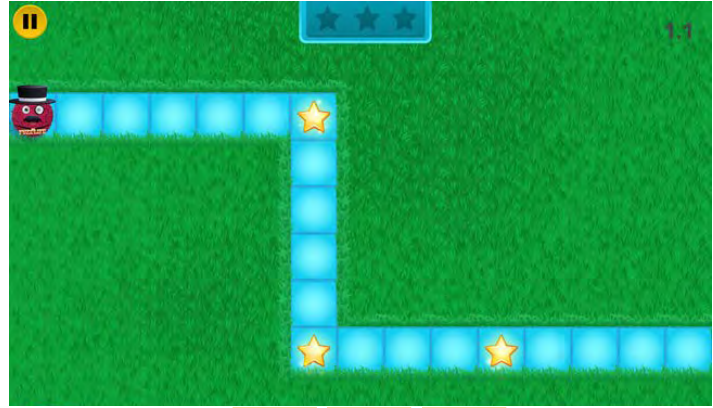
```
fuzz.accessory2 = _____
```

```
fuzz.accessory3 = _____
```

My First Code

Your Name: _____

Example:



Directions:

Help the Fuzz get through the maze!

Draw the missing arrows to tell the fuzz which way to roll to get to the end of the maze.


Now you try!



← What goes here?

Your Name: _____


Draw the missing arrows to show the fuzz how to get through the maze



Maze puzzle 1.3. The maze is on a green grassy background. A red character with a top hat is at the start on the left. The path is made of blue blocks. There are three yellow stars on the path. A checkered flag is at the end of the path. The interface includes a pause button, a level indicator (1.3), and three stars.

Start

→ ↓ → ↑ □ □ →




Maze puzzle 1.4. The maze is on a green grassy background. A red character with a top hat is at the start on the left. The path is made of blue blocks. There are three yellow stars on the path. Two gnomes are on the path. A checkered flag is at the end of the path. The interface includes a pause button, a level indicator (1.4), and three stars.

Start

→ □ → □ → □ →


Your Name: _____

Draw the arrows to show the fuzz how to get through the maze



A maze puzzle on a green grassy background. A blue path starts at a 'Start' sign on the left, goes up, right, down, right, down, right, and ends at a checkered finish line on the right. A red car is at the start. There are two red gnomes on the top path, two purple gnomes in the middle, and two red gnomes on the bottom path. Three yellow stars are on the path. A pause button and three stars are in the top left. The number '1.9' is in the top right.

--	--	--	--	--	--	--



A maze puzzle on a green grassy background. A blue path starts at a 'Start' sign on the left, goes up, right, down, right, up, right, and ends at a checkered finish line on the right. A red car is at the start. There are three purple mushrooms in the bottom-left area and three black mushrooms in the middle-right area. Two yellow stars are on the path. A pause button and three stars are in the top left. The number '1.10' is in the top right.

--	--	--

Find the Bug!



Your Name: _____

Directions:

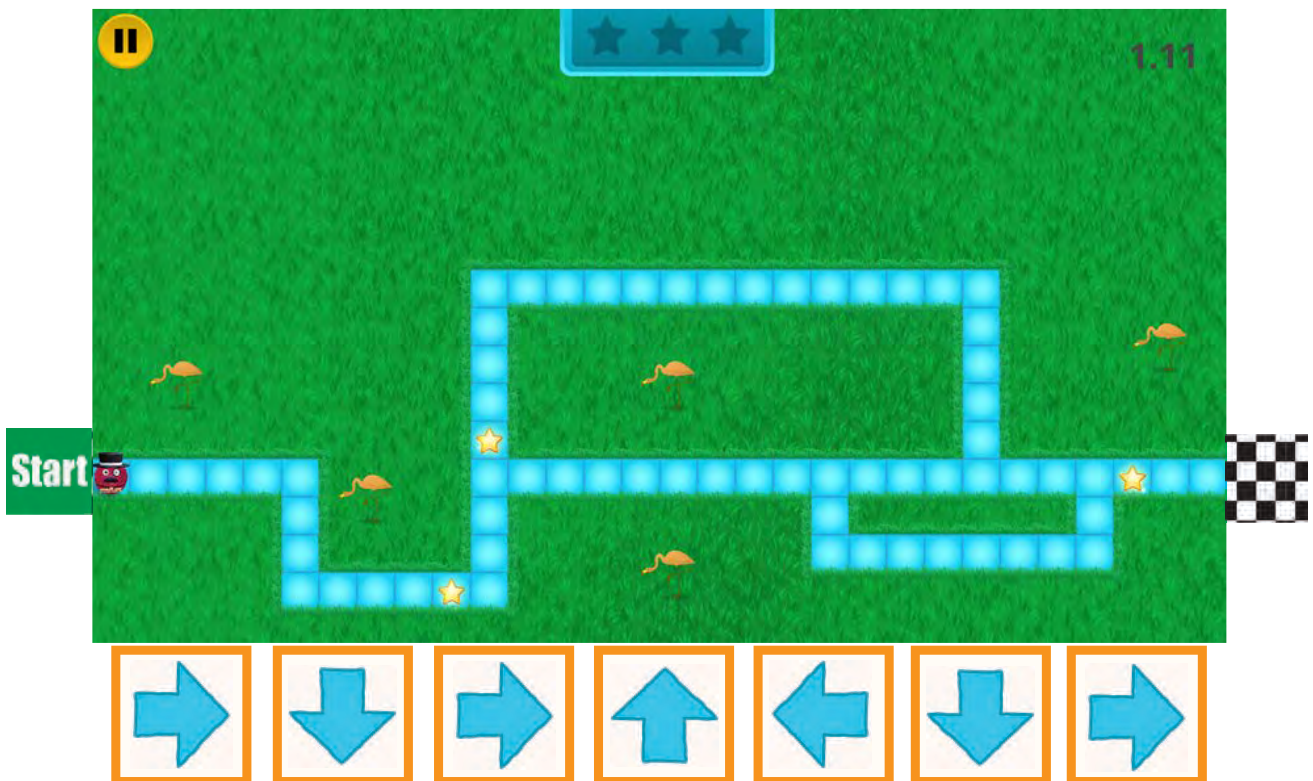
One of the commands in the code below the maze is wrong.

Find the incorrect command and circle it.

Example:



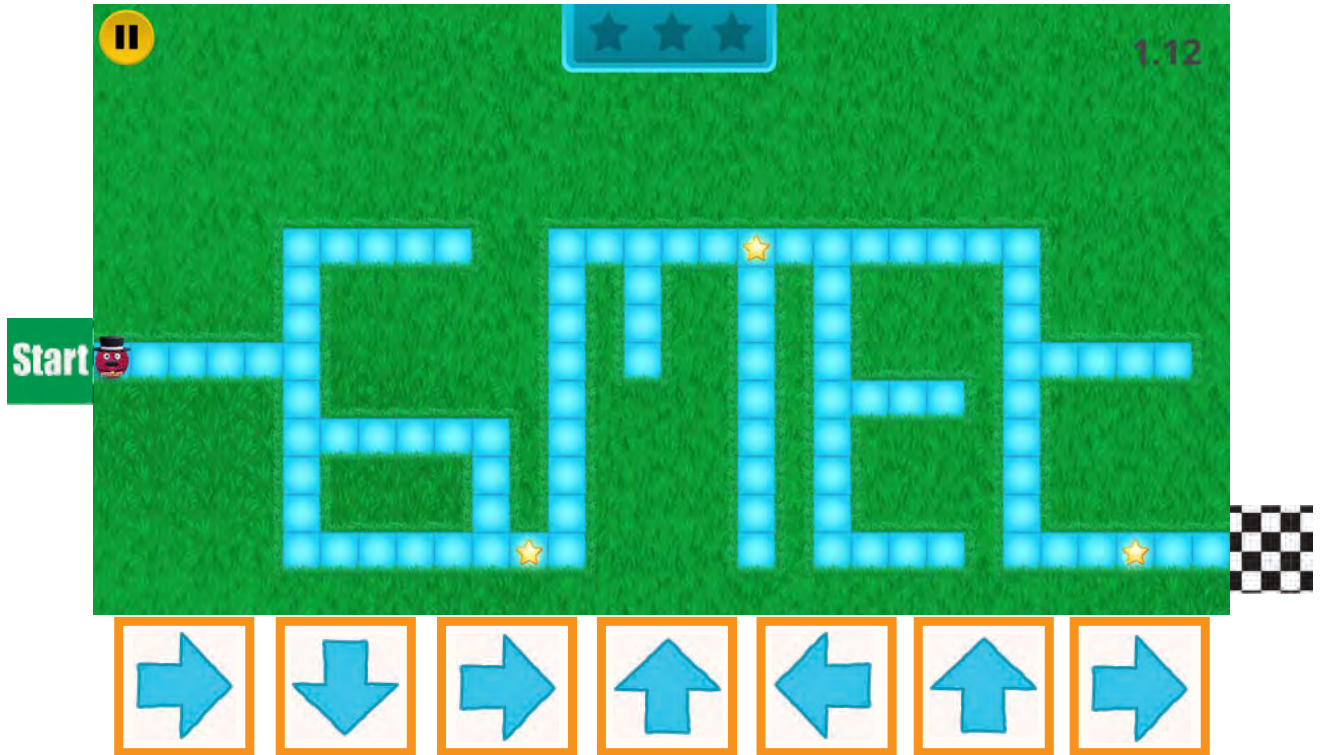
Now You Try!



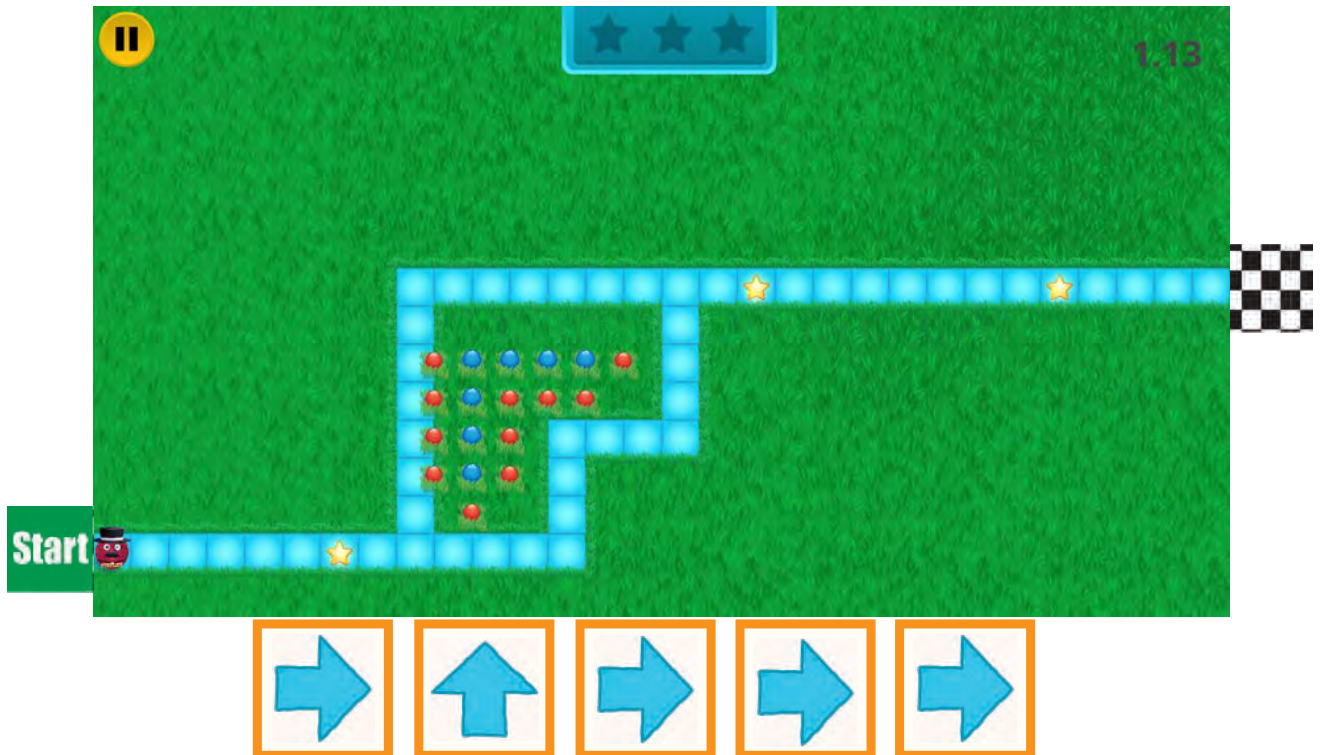
Which of these commands is wrong?

Your Name: _____

Circle the command that is incorrect.



A screenshot of a maze game. The maze is a blue path on a green field. A red robot is at the start on the left. The path leads to a central area with three stars. Below the maze is a sequence of seven movement commands in blue boxes: right, down, right, up, left, up, right. The timer shows 1.12.



A screenshot of a maze game. The maze is a blue path on a green field. A red robot is at the start on the left. The path leads to a central area with a grid of red and blue dots and two stars. Below the maze is a sequence of five movement commands in blue boxes: right, up, right, right, right. The timer shows 1.13.

Bug Hunting



Your Name: _____

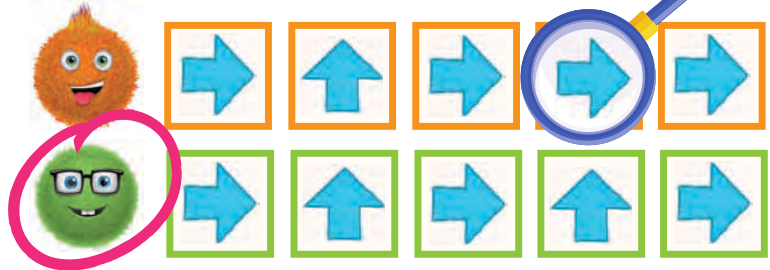
Example:



Directions:

One of the Fuzzes has the correct code to solve the maze.

Circle the fuzz with the correct code!



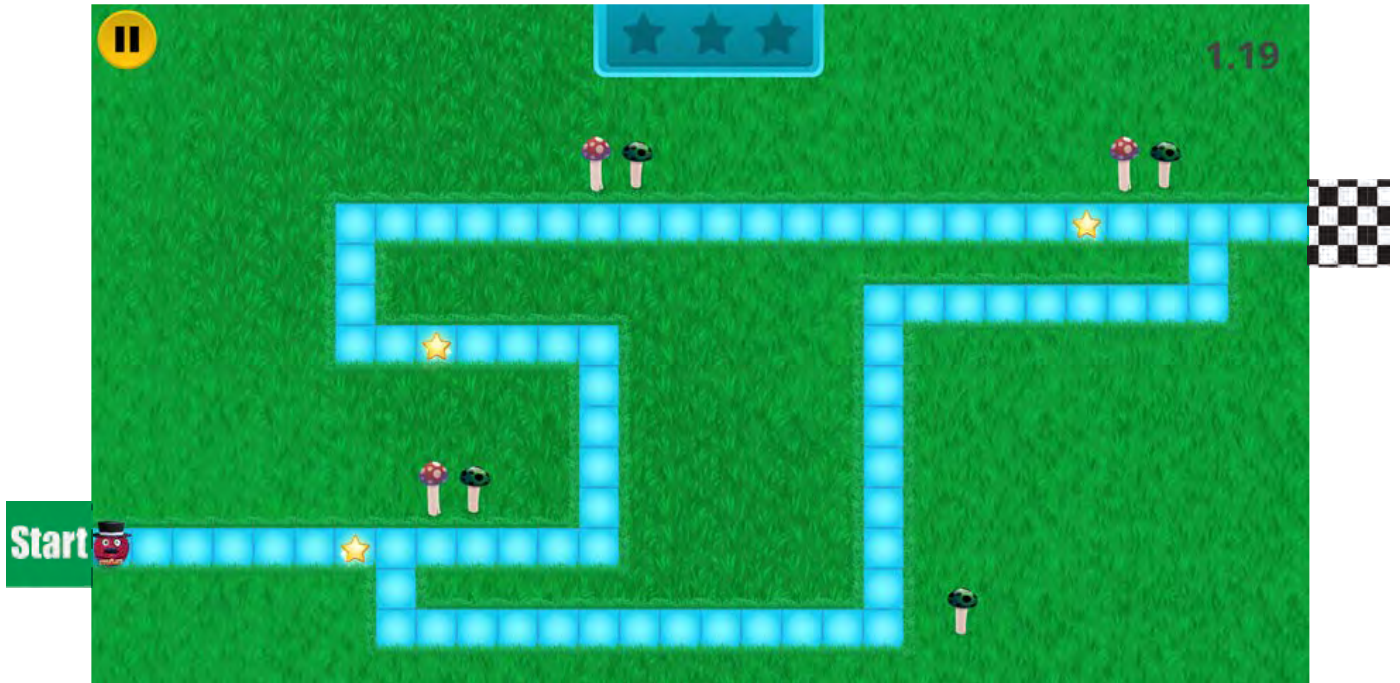
Now You Try!



Which fuzz has the correct code? →



Your Name: _____



Circle the fuzz with the correct code!



Your Name: _____



Circle the fuzz with the correct code!



Beach Cleanup

Your Name: _____

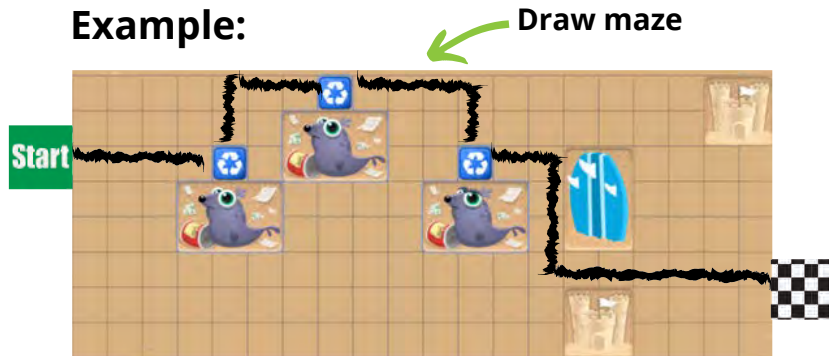
Maze Rules:

- Must connect with all the pieces of trash.
- Can't cross over any obstacles (objects or sea creatures)

Directions:

1. Draw a path from the start tile to the end tile that connects with all the blue recycle tiles.
2. Write the arrow commands in the command bins that would solve the maze!

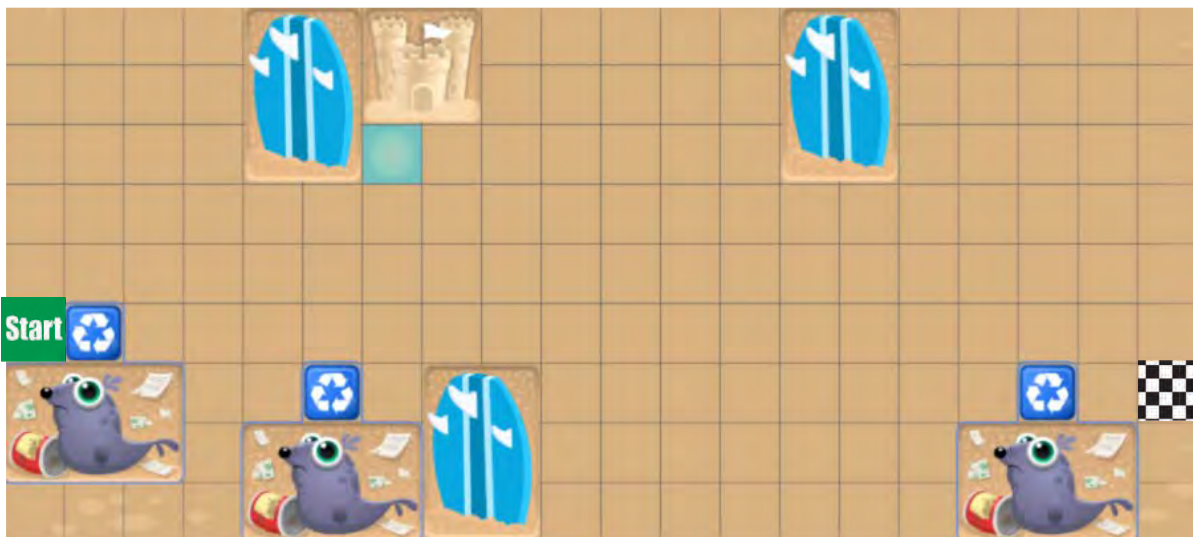
Example:



Write code



Now you try! Draw the path that connects the recycle tiles



Write code



Your Name: _____

Draw the path that connects the recycle tiles



Write code



--	--	--	--	--	--	--	--	--	--



Write code



--	--	--	--	--	--	--

Your Name: _____

Draw the path that connects the recycle tiles



Write code



--	--	--	--	--



Write code



--	--	--	--	--	--	--

Your Name: _____

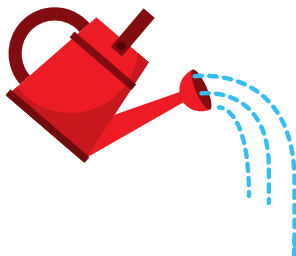
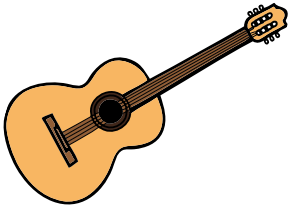
If this, then that

Directions:

Draw a line from the condition on the left to the matching conclusion on the right!

If this...

then that.



What if...

Your Name: _____

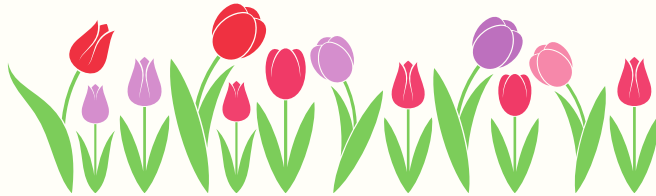
Directions:

Complete each conditional statement.

Draw a picture to go along with it!

Example:

If you water the garden, **then**...



The flowers will grow!

Now You Try!

IF you could breathe underwater, **THEN**...



What might happen? Finish the sentence

Your Name: _____

IF money grew on trees, **THEN...**

IF animals could talk, **THEN...**

Your Name: _____

Make up a couple of your own!

IF _____, **THEN...**

IF _____, **THEN...**

Colorful Conditions

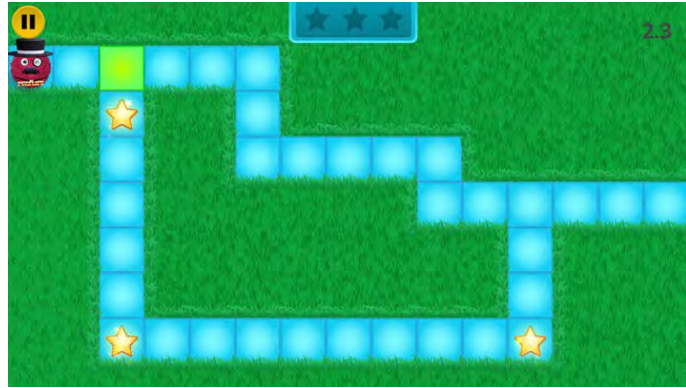
Your Name: _____

Directions:

Which way should the Fuzz roll when it reaches the condition tile?

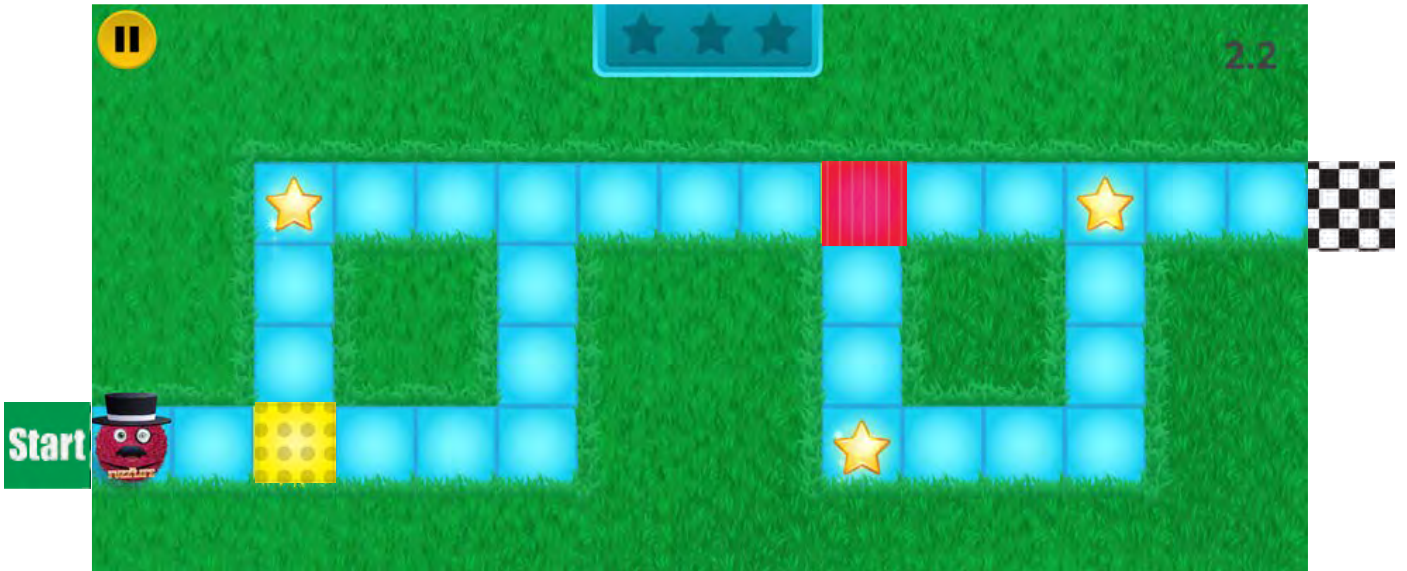
Circle the arrow command that will help the fuzz collect all the stars.

Example:



If , then  or 

Now You Try!



If , then  or 



Which direction should the fuzz roll?



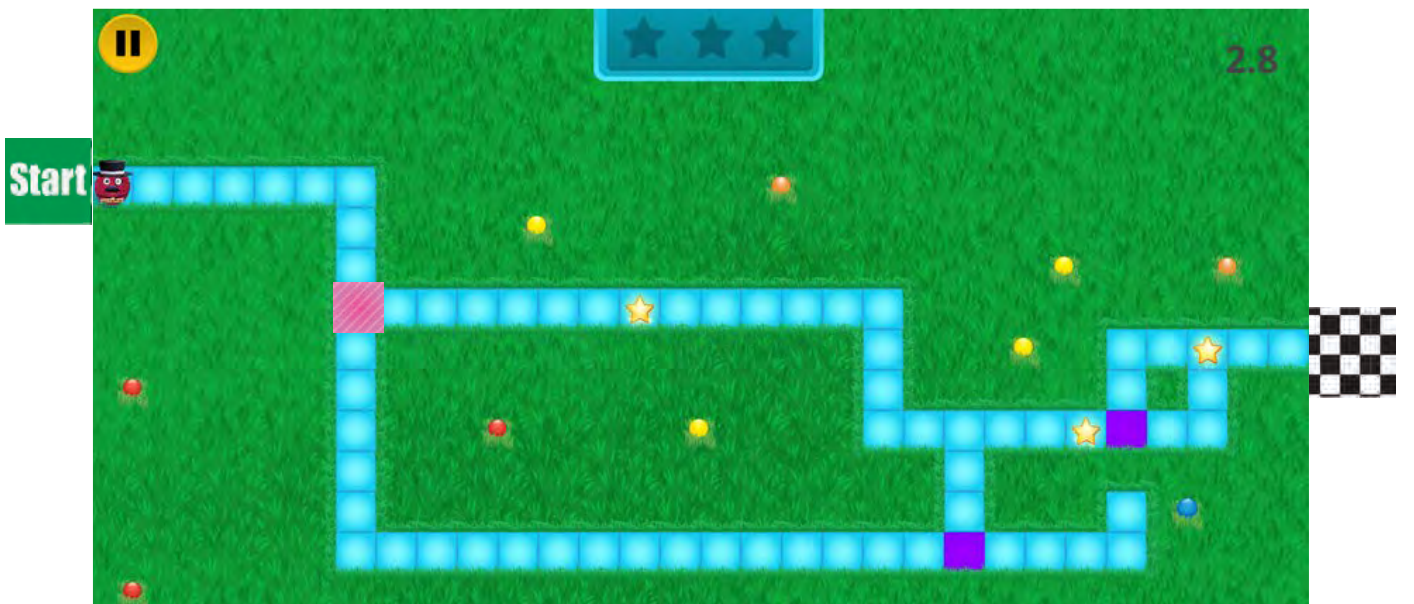
If  , then  or 



If  , then  or 



If  , then  or 



If  , then  or 

Rules Apply

Your Name: _____

Directions:

1. Circle the **rules**
2. Put a rectangle around the **conditions**

Helpful Tips:



A **rule** is something that tells your program the direction to run.

A **condition** is an exception to a rule. It tells your program to change directions.

Now You Try!



Circle the rules. Rectangle the conditions:



Your Name: _____



Circle the rules. Rectangle the conditions:



How do you decide which ones are **conditions** or **rules**? Explain:

Creative Conditions

Your Name: _____

Directions:

Pick an image and use it as inspiration to write a short story. What would happen next? It's up to you!

if... (choose an image)



then... (what happens next? Write your story in the space below)

How Many Loops?

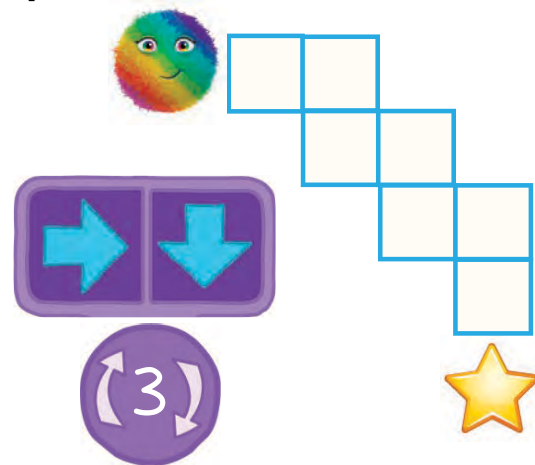
Your Name: _____

Directions:

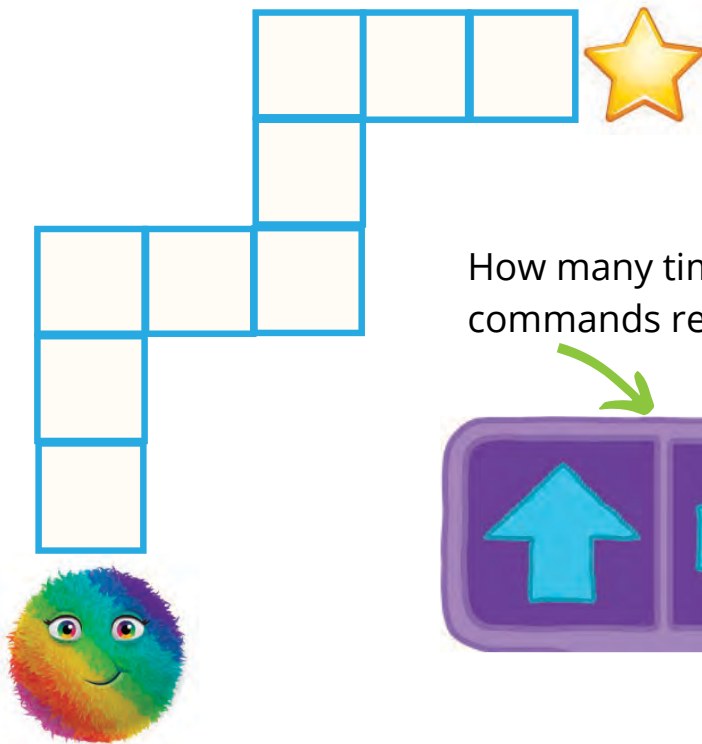
Help the fuzz reach the star!

Write the number of times the fuzz needs to loop (repeat) the two commands.

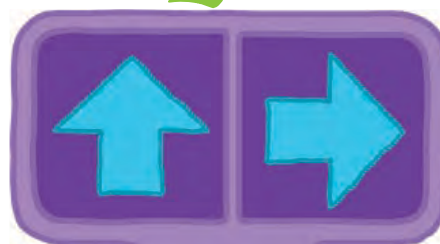
Example:



Now You Try!

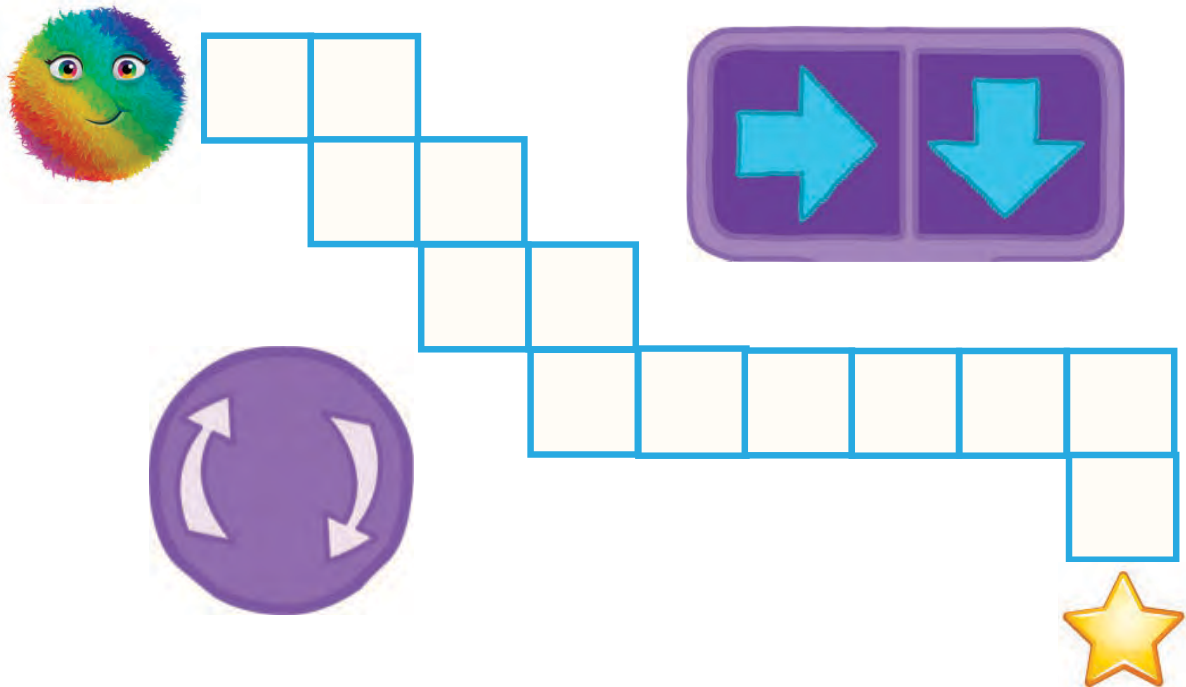
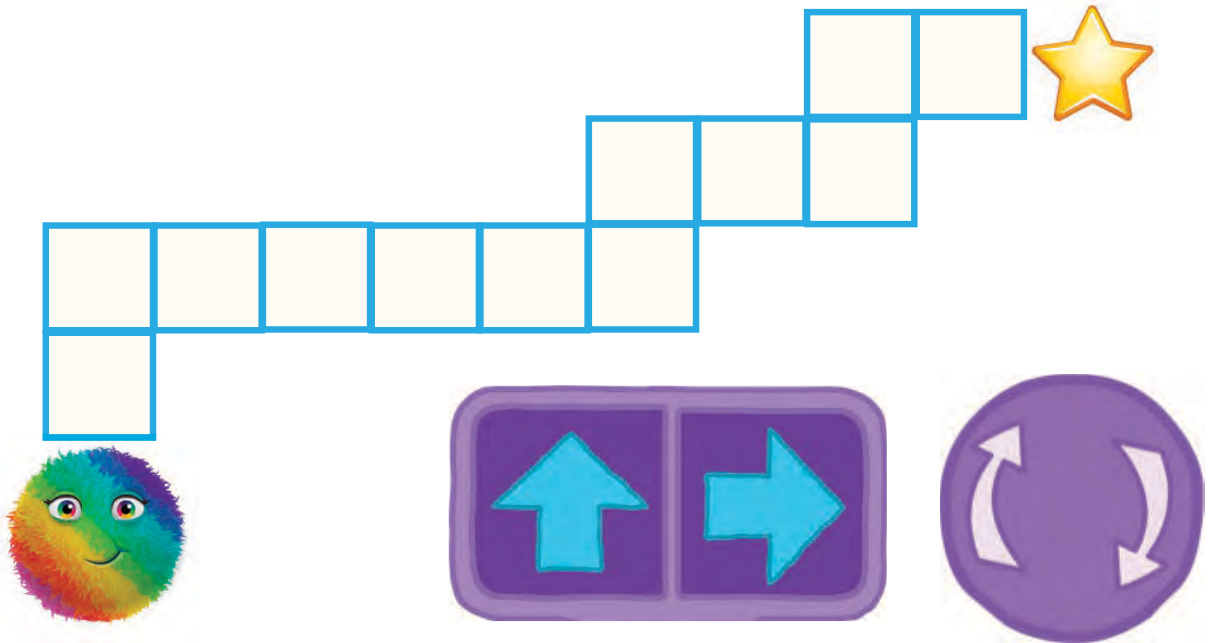


How many times are these commands repeated?



Write the number of loops here

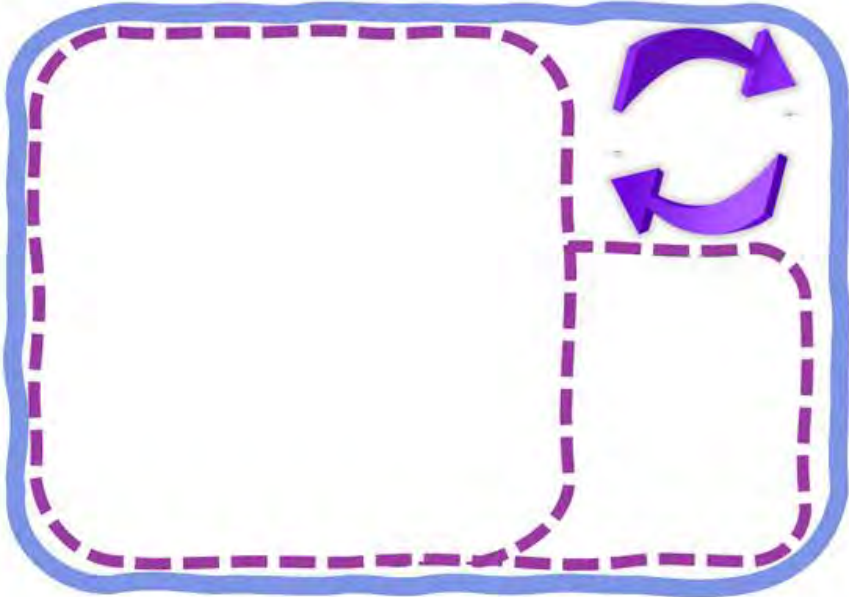
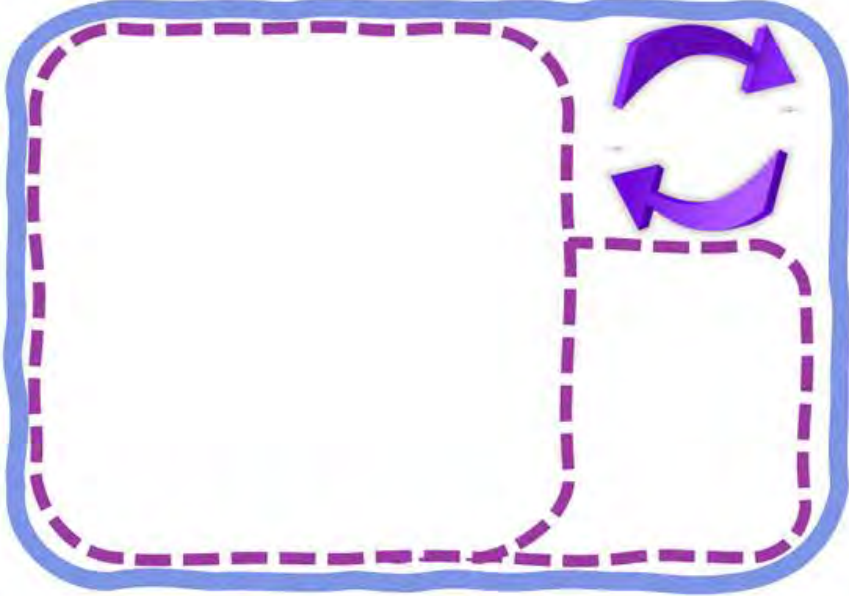
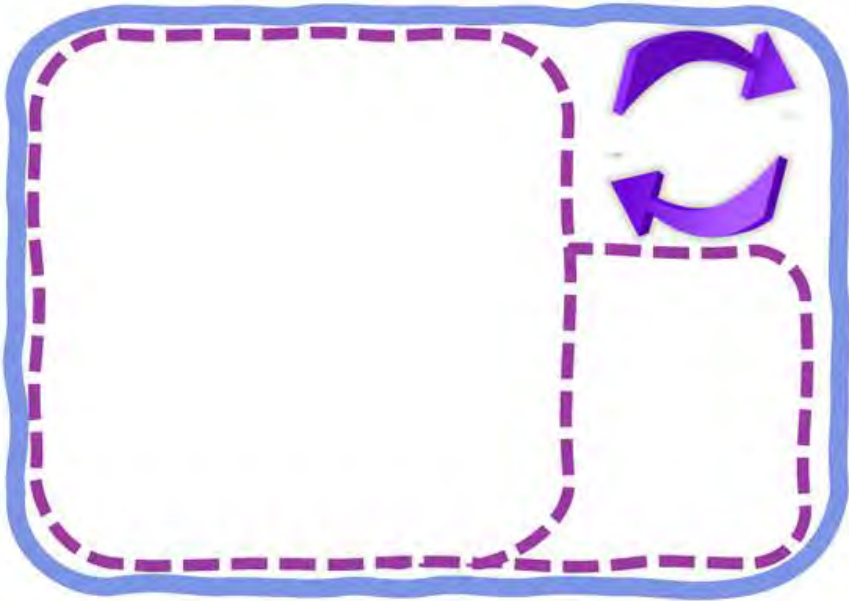
Your Name: _____



_____ 's Fuzzy Flex Program

Name _____

Instructions: In the boxes below, draw or write out the 3 exercises in your routine:



In each loop, write the number of times the move should be repeated.

Share your program with a friend or family member to test it out!

Make changes to the loops as needed.

Kodable

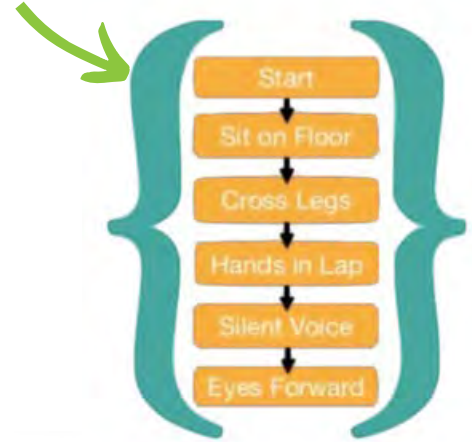
Familiar Functions

Your Name: _____

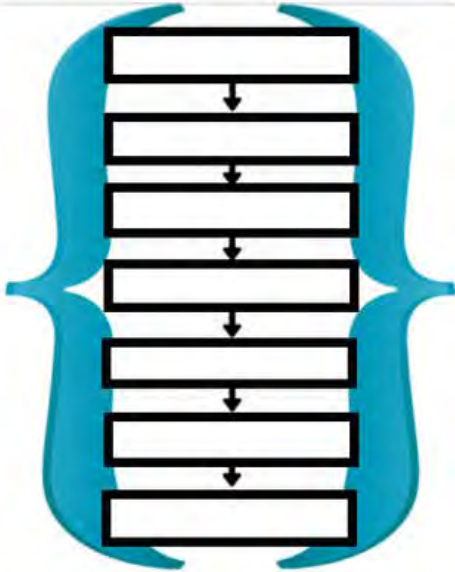
Example: criss-cross applesauce

Directions:

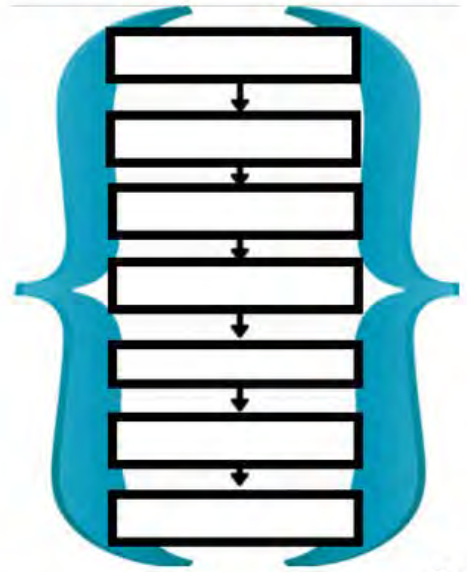
We've turned these daily routines into mental functions! Break down the steps for each task below.



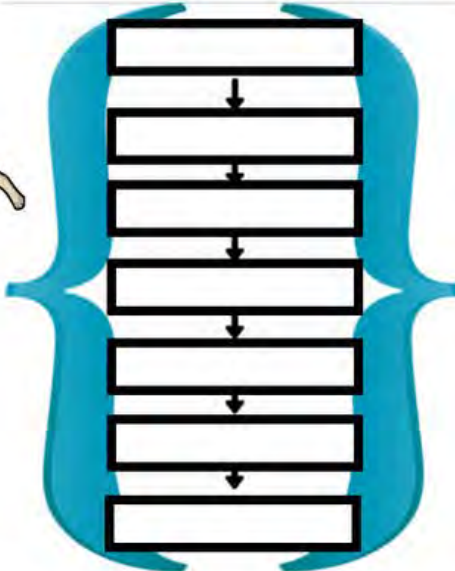
cook breakfast



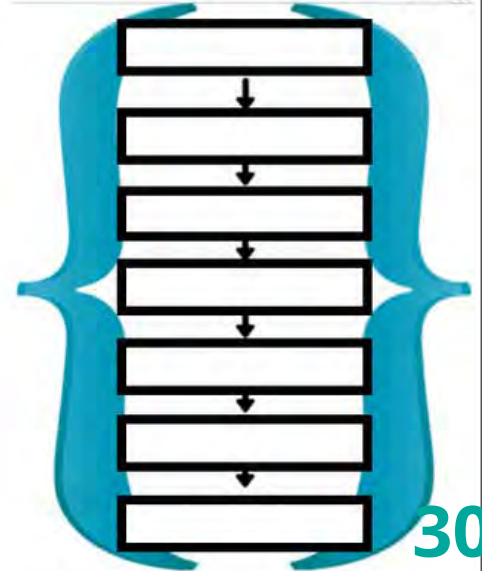
wash hands



play fetch



tie shoes



Fashionable Functions

Your Name: _____

Instructions: Write the sequence of steps you follow when you get dressed on the lines below.

function getDressed() {

1 _____

2 _____

3 _____

4 _____

5 _____

}



When you are done, think about the steps a **fuzz** takes to getDressed(). Would they be the same as yours?

Asteroid Sort

Your Name: _____

Directions:

1. Cut out the asteroids
2. Look at their values
3. Sort the asteroids based on the values into the correct variable containers!



Strings:

Integers:

Math with Integers

Directions:

Use integer values to calculate the total goals and goal differential for each soccer game.

Your Name: _____

Example:

Game 1	
HOME	AWAY
3	0

```
var homeGoals = 3  
var awayGoals = 0
```

```
var totalGoals = homeGoals + awayGoals;  
// totalGoals will be 3  
  
var diffGoals = homeGoals - awayGoals;  
// diffGoals will be 3
```

Now You Try!

Game 2	
HOME	AWAY
1	2

```
var homeGoals = ____  
var awayGoals = ____
```

```
var totalGoals = homeGoals + awayGoals;  
// totalGoals will be ____  
  
var diffGoals = awayGoals - homeGoals;  
// diffGoals will be ____
```

Game 3	
HOME	AWAY
4	4

```
var homeGoals = ____  
var awayGoals = ____
```

```
var totalGoals = homeGoals + awayGoals;  
// totalGoals will be ____  
  
var diffGoals = awayGoals - homeGoals;  
// diffGoals will be ____
```



Design your Hero

Your Name: _____

A **hero** can be a parent, sibling, grandparent, friend, teacher, coach, or anyone!
What do you think makes someone a hero?

Meet Kara!

This is Kara. She is someone's hero!
Her unique properties are defined in the JavaScript code below.



```
kara = new Hero ( ) ;
```

```
kara.hair = black  
kara.eyes = brown  
kara.job = doctor  
kara.personality1 = kind  
kara.personality2 = funny  
kara.personality3 = brave
```

Directions:

Choose someone in your life you are a hero to you. Draw a picture of them and define their properties in the JavaScript template below.

```
_____ = new Hero ( ) ;
```

```
_____.hair = _____
```

```
_____.eyes = _____
```

```
_____.job = _____
```

```
_____.personality1 = _____
```

```
_____.personality2 = _____
```

```
_____.personality3 = _____
```