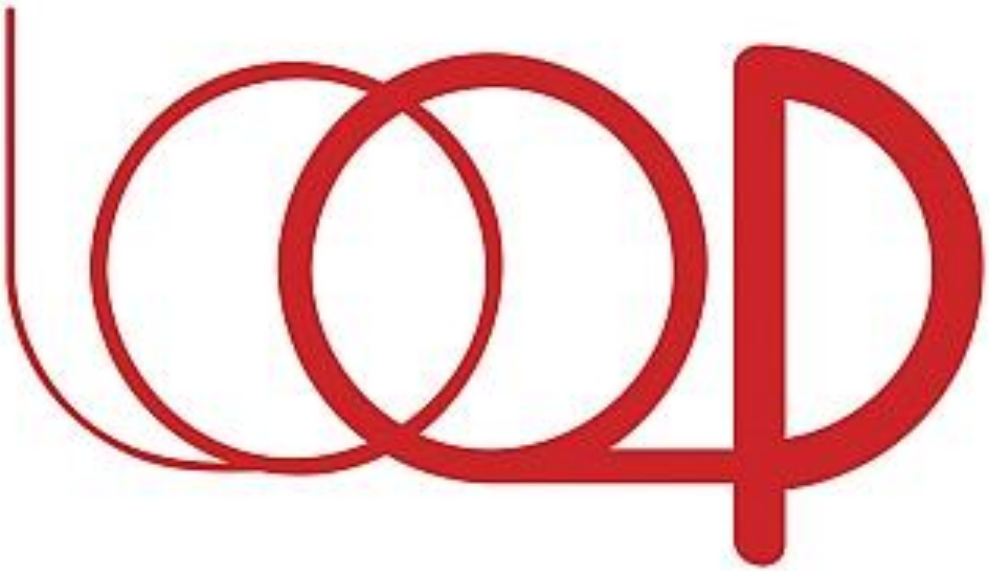


```
setText("output", (getText("output") + " CAT ");
```

Inside Output Before:

DOG

Inside Output After:

DOG CAT

Set the label named output

To be

Whatever was in output before

And add this new thing onto it.

```
setText("output", (getText("output") + " CAT ");
```

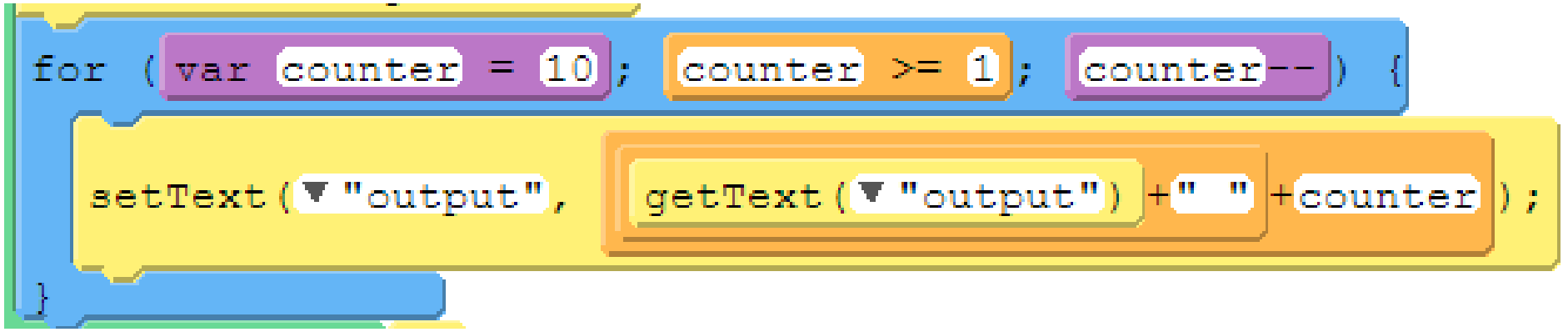
Inside Output Before:

DOG

Inside Output After:

DOG CAT

```
for (var counter = 10 ; counter >=1; counter--)
{
   setText("output", (getText("output") + " " + counter);
}
```



Try the first question now.

For Loops

3.3 K

Name: _____

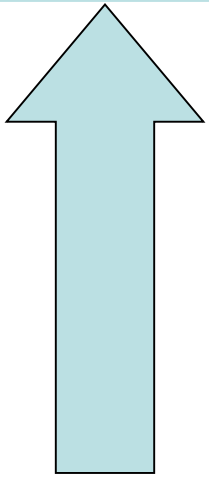
0. What is in output before and after the line of code is run?

	Output Before	Code	Output After
(a)	`cat`	`setText("output", (getText("output") + "  rat");`	
(b)	`ick`	`setText("output", (getText("output") + "  ick");`	
(c)	`1 2 3 4`	`setText("output", (getText("output") + "  5");`	
(d)	`1 4 9 16`	`setText("output", (getText("output") + "  25");`	

Shortcut	Meaning
i++	Add one
i--	Subtract one
i+=2	Add two
i-=2	Subtract two
i+=12	Add twelve
i-=45	Subtract forty five

THIS is a loop:

```
for (var i = 0 ; i < 10 ; i++)
{
    setText("output", (getText("output") + " " + i);
}
```



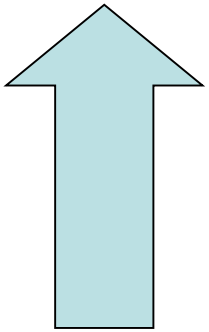
That thing = Loop

THIS is a loop:

```
for (var i = 0 ; i < 10 ; i++)
{
    setText("output", (getText("output") + " " + i);
}
```

It prints THIS on the screen.

0 1 2 3 4 5 6 7 8 9



THIS is a loop:

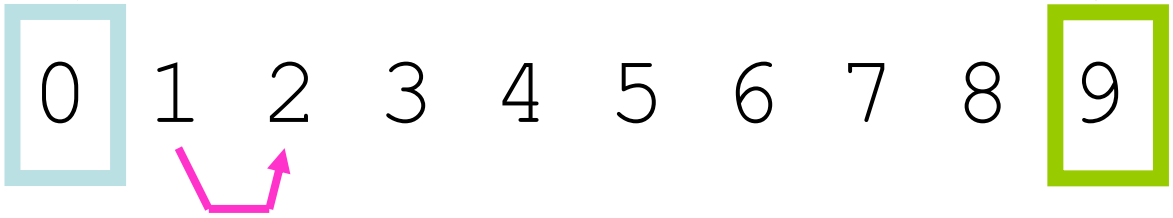
Start

End

```
for (var i = 0 ; i < 10 ; i++)
{
    setText("output", (getText("output") + " " + i);
}
```

Up by one

It prints THIS on the screen.



Here is another:

```
for (var i = 1 ; i < 6 ; i++)
{
  setText("output", (getText("output") + " " + i);
}
```

Here is another:

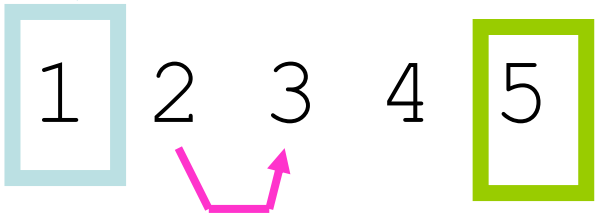
Start

End

```
for (var i = 1 ; i < 6 ; i++)
{
  setText("output", (getText("output") + " " + i);
}
```

Up by one

It prints THIS on the screen.



Here is yet another:

```
for (var i = 10 ; i > 0 ; i--)
{
  setText("output", (getText("output") + " " + i);
}
```

Here is yet another:

Start

End

```
for (var i = 10 ; i > 0 ; i--)
{
  setText("output", (getText("output") + " " + i);
}
```

Down by one

It prints THIS on the screen.

10 9 8 7 6 5 4 3 2 1

OK, another:

```
for (var i = 1 ; i < 20 ; i+=3)
{
  setText("output", (getText("output") + " " + i);
}
```

OK, another:

Start

End

```
for (var i = 1 ; i < 20 ; i+=3)
{
  setText("output", (getText("output") + " " + i);
}
```

Up by three

It prints THIS on the screen.

1 4 7 10 13 16 19

2. Match the description with the loop.

Match	Loop	Description

	`for(var i = 0; i < 10; i++) {`
	`  setText("output", (getText("output") + " " + i);`
	`}`
		(a) Prints 10 icks on the screen.

	`for(var i = 20; i > 0; i--) {`
	`  setText("output", (getText("output") + " " + i);`
	`}`
		(b) Increasing, up by one.

	`for(var i = 0; i < 10; i++) {`
	`  setText("output", (getText("output") + " ick");`
	`}`
		(c) Prints perfect squares.

	`for(var i = 1; i < 10; i++) {`
	`  setText("output", (getText("output") + " "+ (i*i));`
	`}`
		(d) Prints a b a b a b a b a b

	`for(var i = 0; i < 5; i++) {`
	`  setText("output", (getText("output") + " a b");`
	`}`
		(e) Decreasing, down by one.

The pieces of a loop

```
for ( var i = 1 ; i < 20 ; i+=3 )
{
    setText("output", (getText("output") + " " + i);
}
```

1. **Initialize the loop variable**
2. **Test the stopping condition**
3. **Move towards the stopping condition**
4. **Steps to repeat**