

~~int i;~~

int i;

for(i=0; i <= 5; i++) {

point(i\*10, i\*10);

println(i); // what is printed?

0,0

.

10,10

20,20

30,30

40,40

50,50

1

~~0~~ + ~~2~~ + ~~4~~  
~~6~~

console

6

Problems you can ignore

(Fall 2016): 1, 2, 3

(Winter 2013): 10

# Nested for-loops

for-loops-practice.pdf  
for-loops-practice-ii.pdf

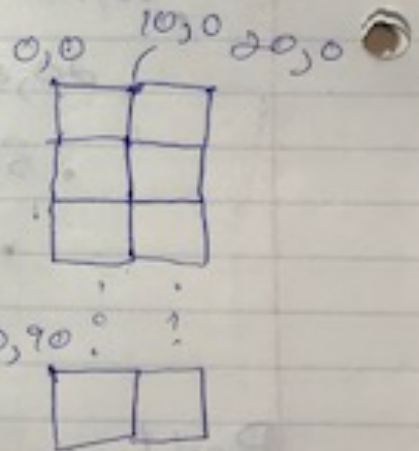
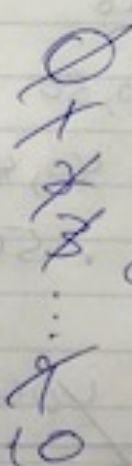
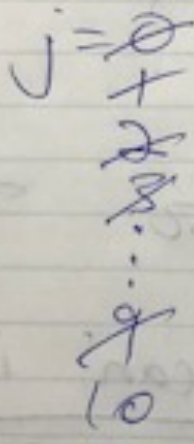
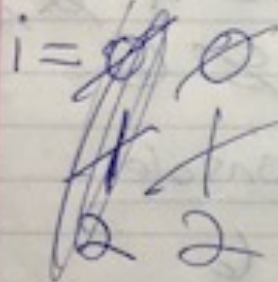
slides

(outer) for(int i=0; i<10; i++) {

(inner) for(int j=0; j<10; j++) {

rect(i+10, j+10, 10, 10);

}





```
size(800, 800);
int size = width / 5; } → 160
```

```
for(int i=0; i < width; i += size) {
    for(int j=0; j < height; j += size) {
        rect(i, j, size, size);
    }
}
```

0,0	160,0
0,160	160,160
0,320	160,320
0,480	160,480
0,640	160,640

i	j
<del>0</del>	<del>0</del> <del>0</del>
<del>160</del>	<del>160</del> <del>160</del>
320	320 320
	480 480
	<del>640</del> <del>640</del>
	800 800

i: 1-8 (8)  
j: 3-8 (6)

```
for(int i=1; i <= 8; i++) {
```

```
    for(int j=3; j < 9; j++) {
```

```
        point(i, j);
    }
}
```

How many points are drawn by this program?

56

54

48

```

int sum = 0;
for (int i = 0; i < 44; i++) {
    for (int j = 0; j < 33; j++) {
        sum += (i + j);
    }
}

```

// what is value of sum after  
 // this program runs?  
 printf("%d", sum);

0+0 =	0	
0+1 =	1	
0+2 =	<u>2</u>	3
1+0 =	1	
1+1 =	2	
1+2 =	<u>3</u>	6
2+0 =	2	
2+1 =	3	
2+2 =	<u>4</u>	9
3+0 =	3	
3+1 =	4	
3+2 =	5	

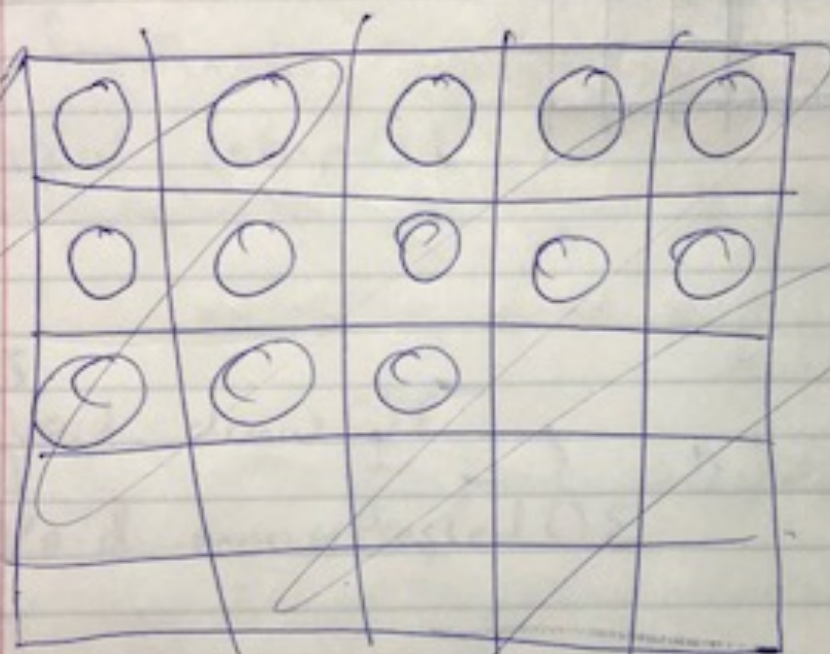
	12
	<u>30</u>

	30
1	<del>j</del> × 2
x	<del>0</del> + 2
2	0

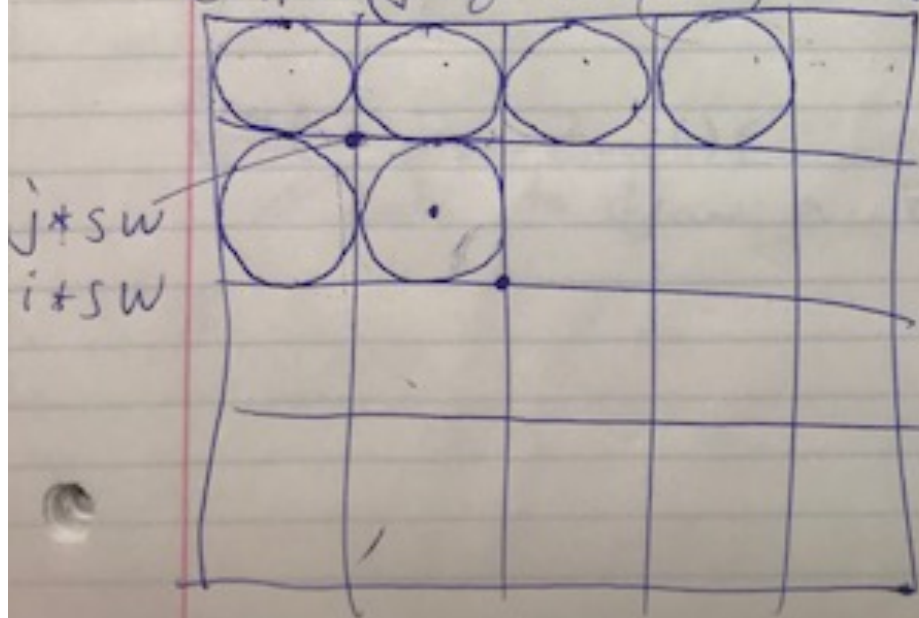


# Quiz Thursday

Up to loops (excluding nested for loops)  
Ch. 6

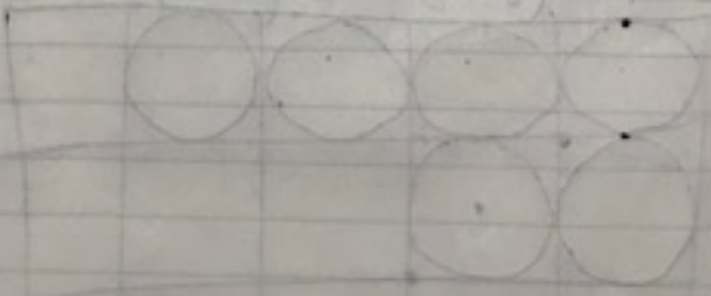


$\text{ellipse}(j * \text{squareWidth} + \text{sw}/2, i * \text{sw} + \text{sw}/2, \text{sw}, \text{sw});$



$\text{rect}(j * \text{squareWidth},$   
 $i * \text{squareWidth},$   
 $\text{squareWidth},$   
 $\text{squareWidth});$

using  $i, j, \text{squareW}$ ,  
what is the circle



# User defined functions (Methods)

## Ch. 7

```
rect(100, 100, 50, 50);
```

↳

function call

```
void setup() {
```

```
}
```

```
void draw() {
```

```
}
```

```
void mousePressed() {
```

```
}
```

```
void keyPressed() {
```

```
}
```

```
}
```

```
void drawZoo() {
```

```
// code to draw a Zoo
```

```
}
```



# function definitions

void functionName() {  
int, float, boolean  
body identifier  
parameters

→ return type. If the return type is void, it will only perform actions + not give back a value.

~~void drawSquare(int a, int b, int size);~~  
void drawSquare(int a, int b, color z);

separate parameters with a comma

fill(z);  
rect(a, b, size, size);