ZHdK
Interaction Design
Programming Exam, 1. Semester
Student Name: .....

1. Choose **the most appropriate** value for the **float** data type **(1 point)**

☐a. `float myfloat = "hello world";`
☐b. `float myfloat = true;`
☐c. `float myfloat = 432.324;`
☐d. `float myfloat = 'm';`
☐e. `float myfloat = 60;`

2. What are the console outputs of the following code examples? **(3 points)**

```
int x = 4;
if (x >= 8) {
      println(true);
} else {
      println(false);
}
```

☐ true
☐ false

```
int x = 4;
if (x == 44) {
      println(true);
} else {
      println(false);
}
```

☐ true
☐ false

```
int x = 4;
if (x <= 5 && x >= 2) {
      println(true);
} else {
      println(false);
}
```

☐ true
☐ false

---

3. Select the correct console output for the following program **(1 point)**

```
char letter = 'D';
String outputString;

if (letter == 'B') {

   outputString = "Alpha";

} else if (letter == 'B') {

   outputString = "Bravo";

} else if (letter == 'C') {

   outputString = "Charlie";

} else {

   outputString = "None";

}

println(outputString);
```

☐a. Alpha
☐b. Bravo
☐c. Charlie
☐d. Delta
☐e. None
☐f. Error

PART 2: Drawing

The following questions require you to careful read the code examples, and draw the visual output in the grid provided. Each cell on the grid represents one pixel.

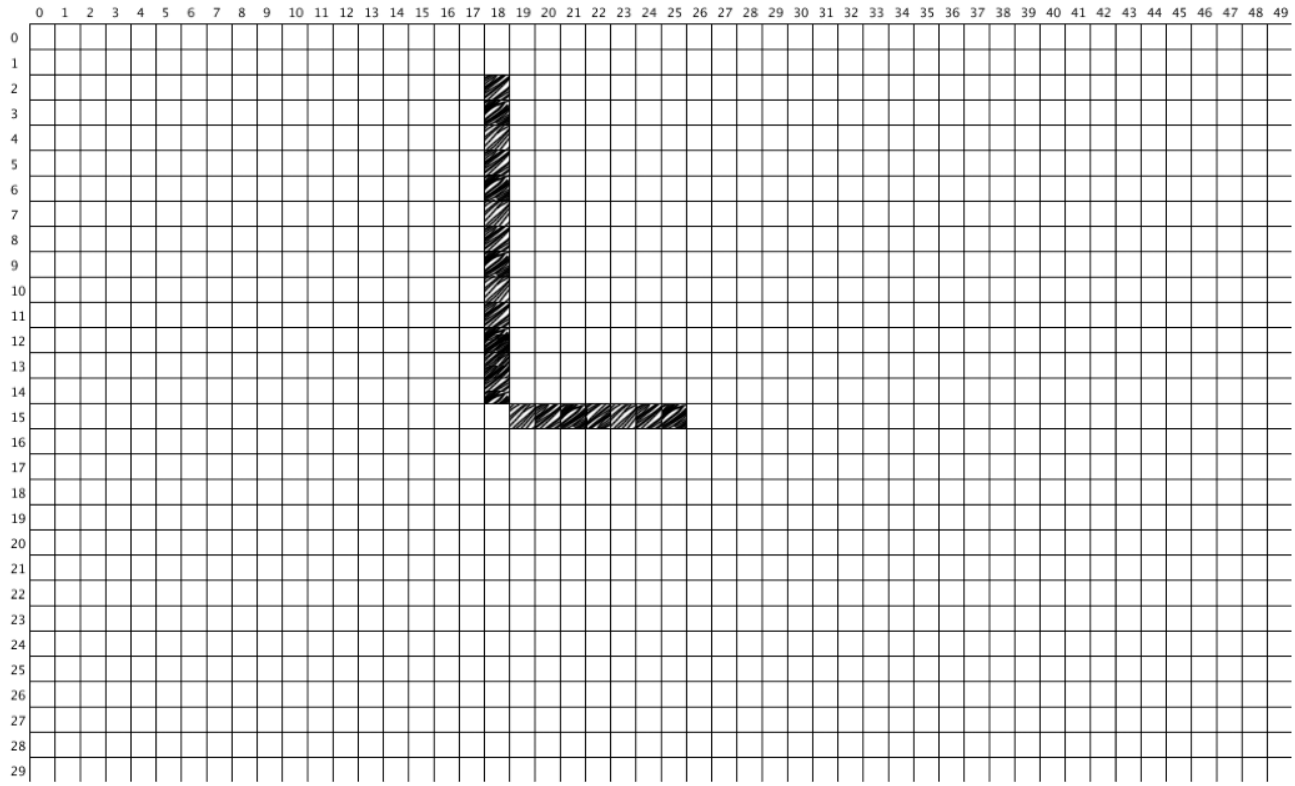
Note: The point() function accepts an (x, y) value and draws one pixel at the given coordinate on the display.

EXAMPLE QUESTION

```
void setup() {
     size (50, 30);
};

void draw() {
          for (int i = 2; i<15; i++) {
               point(18,i);
          }
          for (int i = 19; i<=25; i++) {
               point(i,15);
          }
}
```

Output

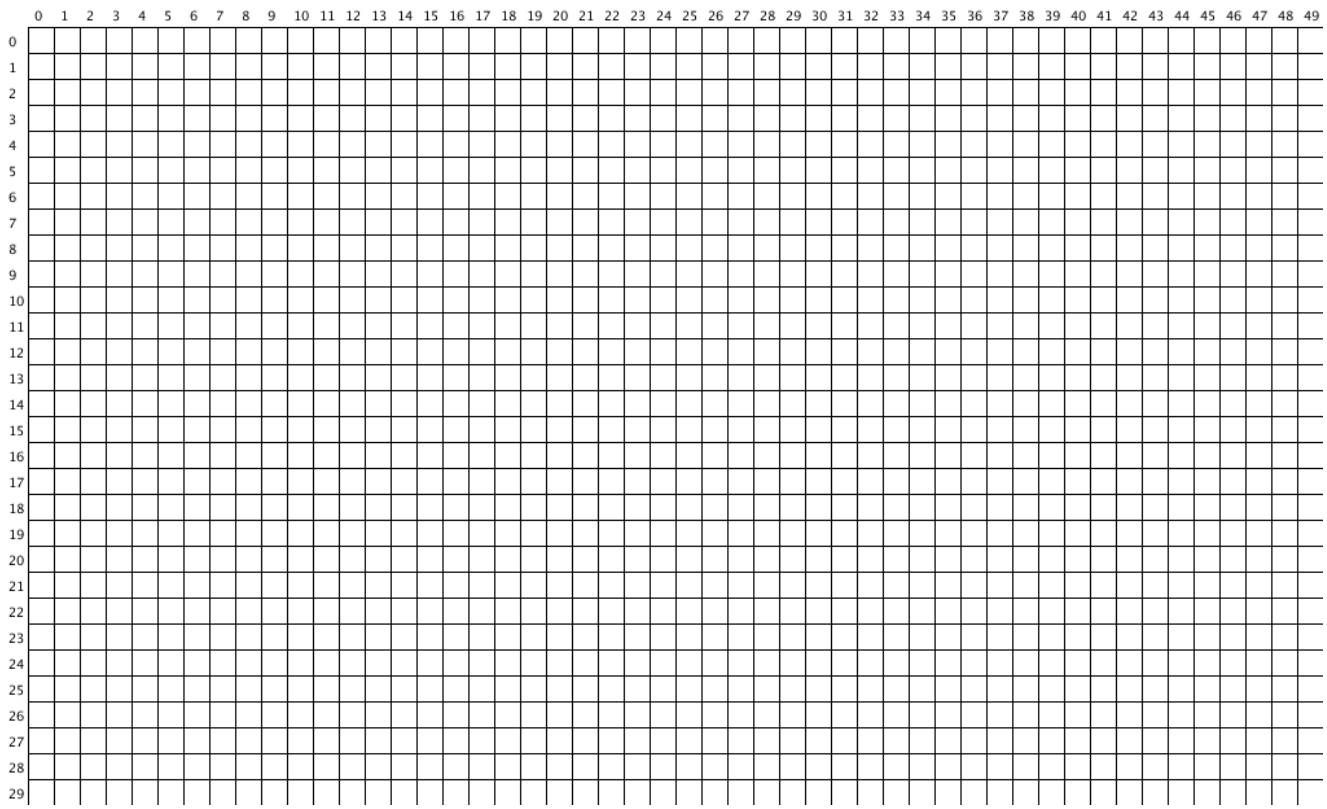


4. Read through the following program and draw the output on the grid below. **(4 points)**

```
void setup() {
     size (50, 30);
};

void draw() {
          doublePoint(5,20);
          doublePoint(40,5);
}

void doublePoint(int x, int y) {
          point(x, y);
          point(x, y+2);
}
```



5. Read through the following program and draw the output on the grid below. (**4 points)**

```
void setup() {
     size (50, 30);
};

void draw() {
  for (int i = 5; i<width; i+=5) {
         for (int j = 10; j<height; j+=10) {
                point(i, j);
         }
  }
}
```