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;

switch(letter) {
      case 'A':
            outputString  = "Alpha";
      break;
      case 'B':
            outputString  = "Bravo";
      break;
      case 'C':
            outputString  = "Charlie";
      break;
      default:
            outputString  = "None";
      break;
}

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.

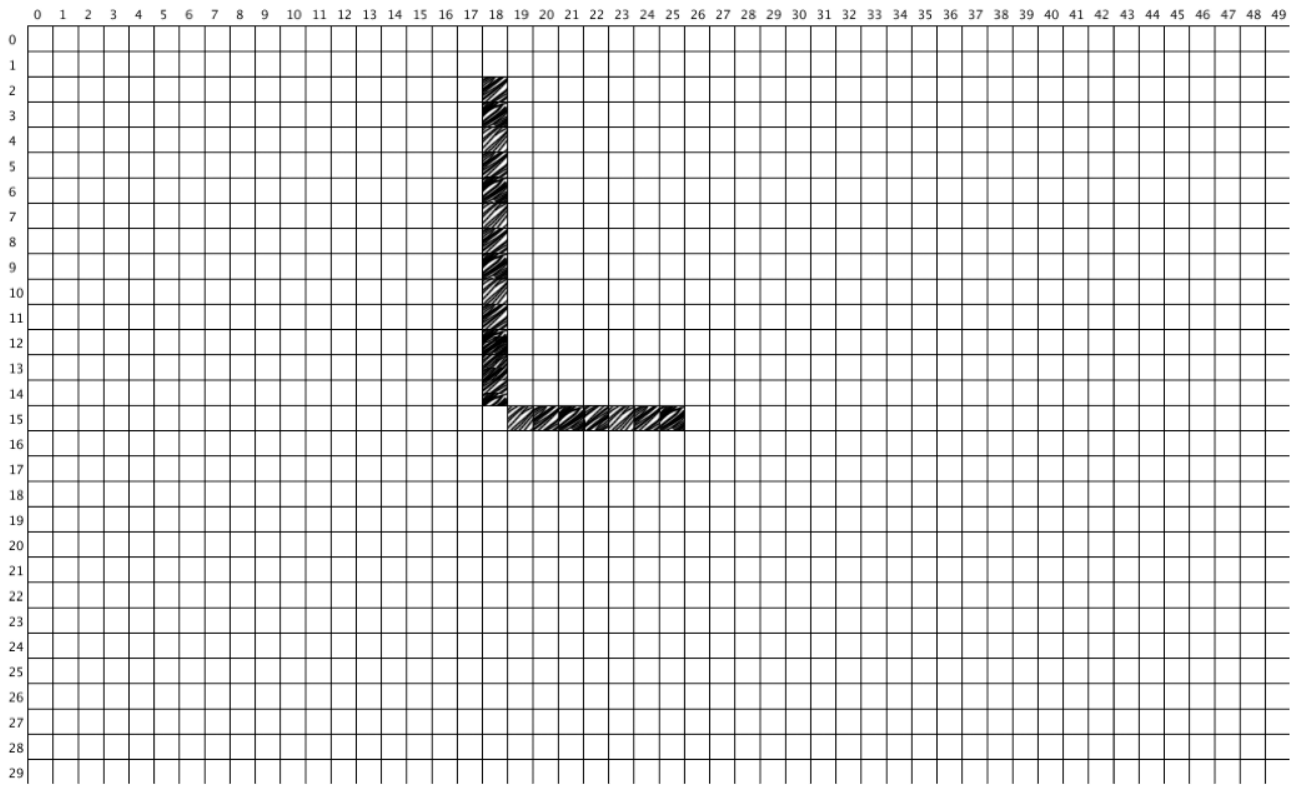
EXAMPLE QUESTION

```
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



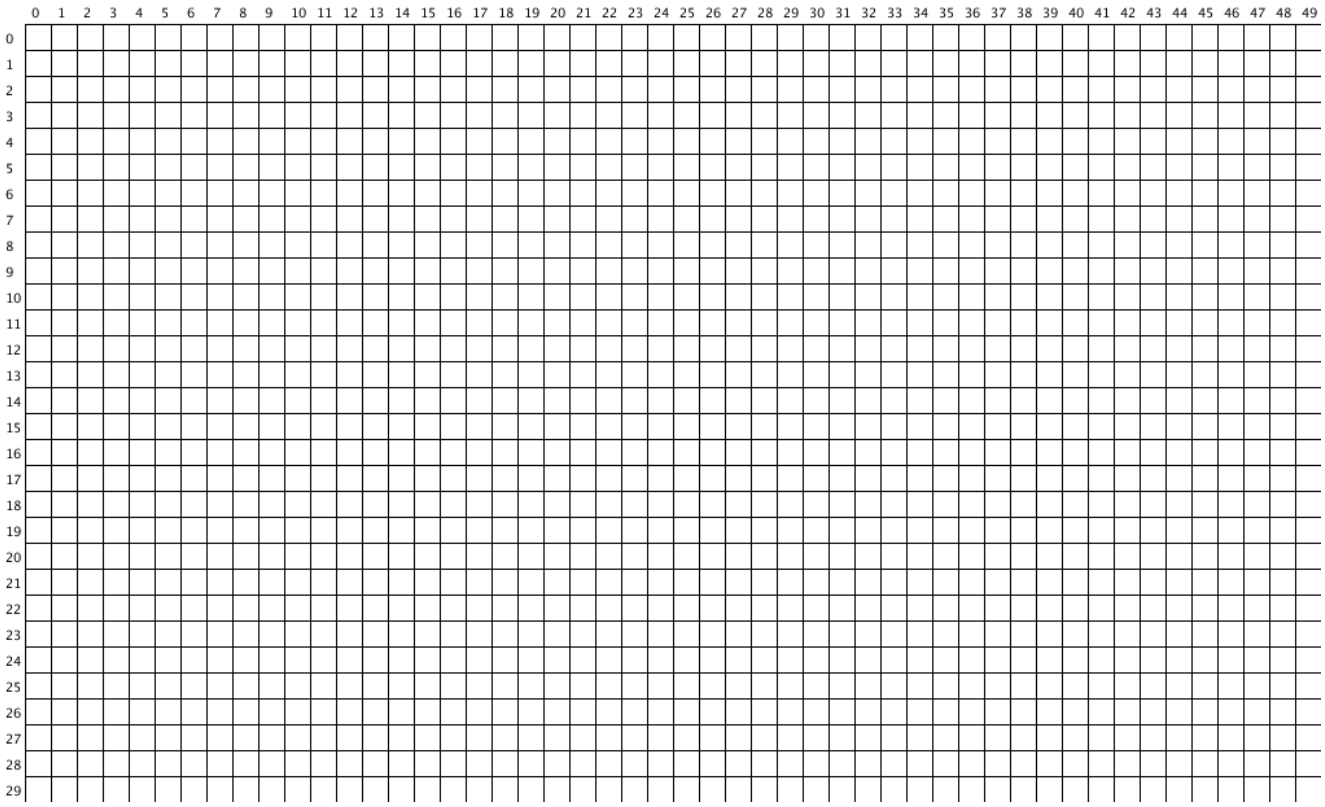
4. Read through the following program and draw the output on the grid below. **(4 points)**

```
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);
}
```

Output



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);
         }
  }
}
```

Output