

This is a closed notes, closed book exam. Each problem is worth 1 point unless otherwise indicated.

1. What does the following program print?

```
int[] data = new int[5];
for (int i = 0; i < data.length; i++) {
    data[i] = i*10;
}

for (int i = data.length-1; i >= 0; i--) {
    print(data[i] + " ");
}
```

2. What does the following program print?

```
int score = 92;
String grade = "Not passing";

if (score >= 90) {
    grade = "A";
}
if (score >= 80) {
    grade = "B";
}
if (score >= 70) {
    grade = "C";
}
println(grade);
```

3. What does the following program print?

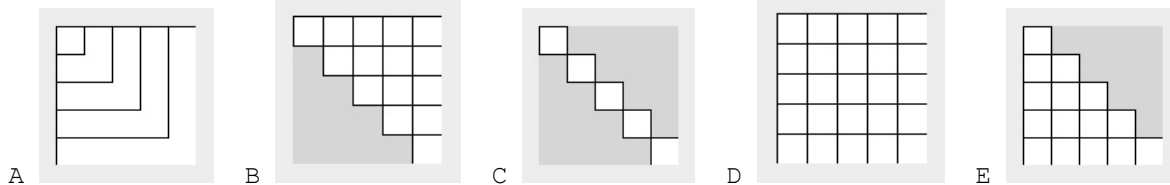
```
void setup {
    int x = 10, y = 5;

    printProduct(x, y);
    x = 2;
    print(" ");
    printProduct(x + y, x);
}

void printProduct(int x, int y) {
    print(x * y);
}
```

4. Which image below corresponds to the image produced by the program below? Enter the letter here ____.

```
for (int row = 0; row < height; row+=20) {
    for(int col = 0; col <= row; col+=20) {
        rect(col, row, 20, 20);
    }
}
```



5. Given the array declaration `int[] data = new int[100];` fill in the blank so the print statement prints what is stored in the last element of the array: `println(_____);`?

THERE ARE MORE QUESTIONS ON THE BACK

6. (3 points) Write a method/function, call it `min`, that takes three integers and **returns** the smallest of the three integers. The method should not *print* anything.

7. (2 points) Create a class to represent a star used to fill a night sky as in the `starryNight` example from class. Your class should work with this example program. A star should be displayed as a diameter 3 white circle.

```
Star[] stars = new Star[1000];
void setup() {
  for(int i = 0; i < stars.length; i++) {
    stars[i] = new Star((int)random(width), (int)random(height));
  }
}
void draw() {
  background(0,0,100);
  for(int i = 0; i < stars.length; i++) {
    stars[i].draw();
  }
}
```