Note: this is how you rotate the text outputScr.text(200, 200,"text", 90)
(x, y, "text', angle at which turns)

```
 * Write a description of class  here. HW_Fundamentals_VincentNguyer
 * We are making a 400 by 400 like a black and white checkered board
 *
 * @author (Vincent Nguyen)
 * @version (a version number or a date)
 */
public class HW_Fundamentals_VincentNguyen
```

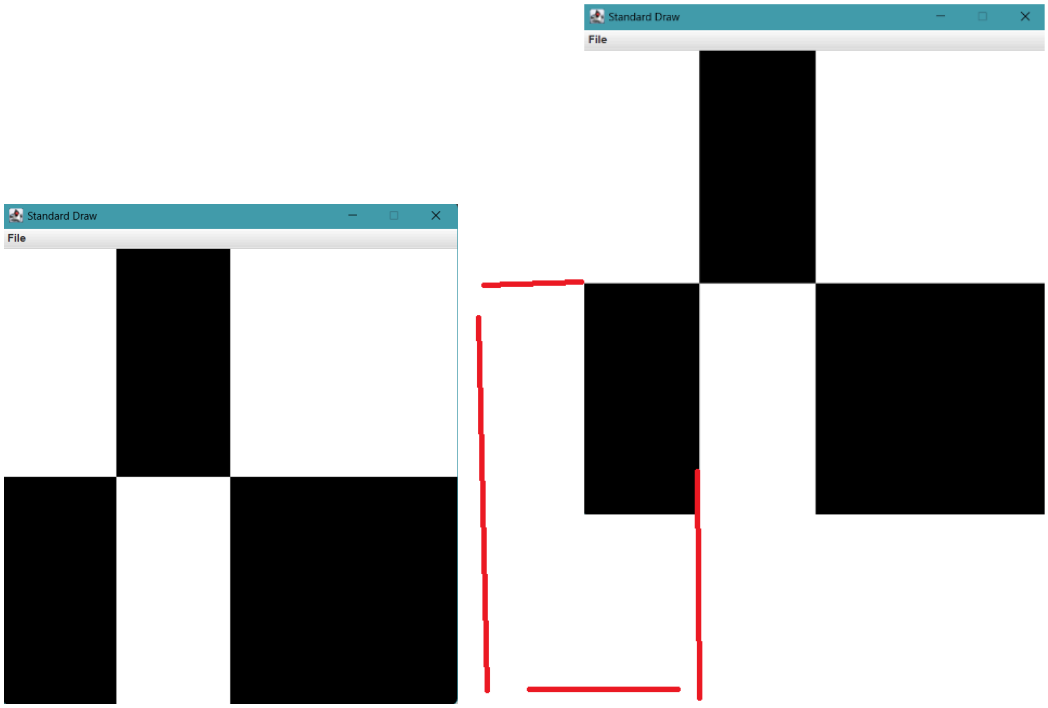
HW must be handwritten on a separate sheet of paper that is scanned.
Coding HW must have

- Handwritte part
- Line numbered Java file
- Must use 400 x 400 scale unlike previous semesters
- Output screen with your name
- Graphics,x,y,width, height must not "hide" defects outside of the screen
- Should use the "TemplatesS":

Graphics problem

```
        Draw scr = new Draw();

        // Set the whole screen to white
        scr.clear(Draw.WHITE);

        // Set the parameters of the screen size
        scr.setXscale(0, 400);
        scr.setYscale(400, 0);

        // Big Black Square top left
        scr.setPenColor(Draw.BLACK);
        scr.filledSquare(325, 325, 125);

        // Big Black Square middle
        scr.filledSquare(100, 100, 100);

        // Small White Squares top left (Overlaps top left square)
        scr.setPenColor(Draw.WHITE);
        scr.filledSquare(50, 50, 50);
        scr.filledSquare(50, 150, 50);

        // Small Black Squares bottom left
        scr.setPenColor(Draw.BLACK);
        scr.filledSquare(50, 250, 50);
        scr.filledSquare(50, 350, 50);
```

scr.filledRectangle(0 , 400, 100, 200)
This creates a rectangle that may look correct, but extends outside the screen and is inaccurate.



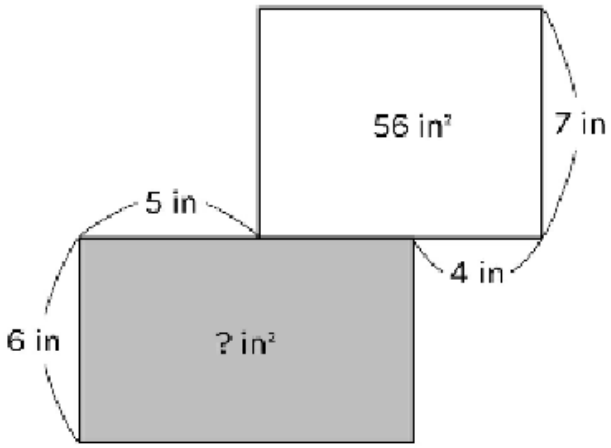
New command
outputScr.pause(2000)

- Means wait two seconds

Solve this using ONLY integers (Puzzle 3)

Plain English: There is a top and bottom rectangle. The bottom height is 6. The top height is 7.

Solve this using ONLY integers (Puzzle 3)



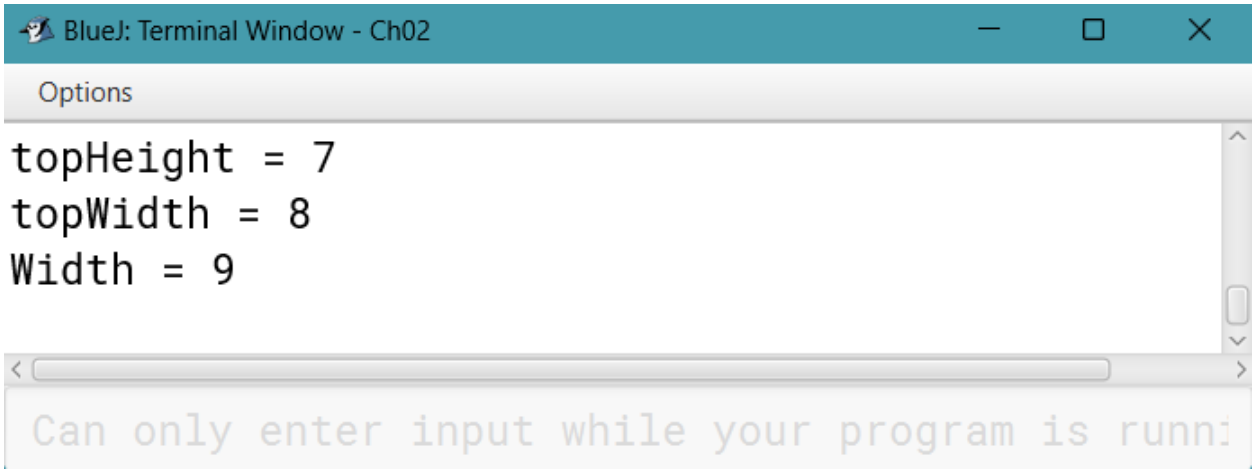
This means we can find the top width because 56 / topHeight is the topWidth because 56 / topHeight is the topWidth. Now we can find the bit Width by 5 + (topWidth - 4). Finally . . . .

I wasnt able to solve

```java
/**
 * Description
 * ----------------------
 * ----------------------
 * @author Vincent Nguyen
 * @version 09/03/24
 */
```

```java
public class Puzzles2VincentNguyen
{
    public static void main(String[] args)
    {
    }

    public static void puzzle3()
    {
        int topHeight, topWidth,mbotArea, topArea, botHeight, Wid
        topArea = 56;
        topHeight = 7;
        botHeight = 6;
        topWidth = 56 /topHeight;
        Width = 5 + (topWidth - 4);
        System.out.println("topHeight" + topHeight);
        System.out.println("topWidth" + topWidth);
        System.out.println("Width" + Width);
    }

```

Output



This is how I will format this from now on.

```
/**
 * Description
 * This is a small program that calculates
 * the discount from a sale
 * ----------------------
 * @author Vincent Nguyen
 * @version 09/03/24
 */

public class DiscountVincentNguyen
{
```

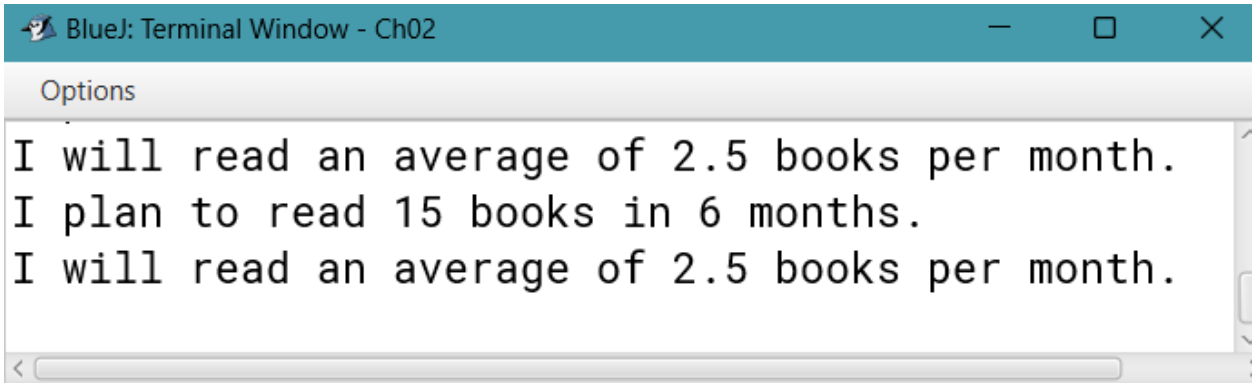
We looked at DiscountYName.java.
New guidelines: “123” are parts of the code you have to comments and code around it

```
17      public static void Discount()
18      {
19          double salePrice;
20          double discount;
21          double discountedPrice;
22          double regularPrice = 59.0;
23
24          // Calculate the amount of a 20% discount
25          discount = 0.2;
26          discountedPrice = regularPrice * discount;
27
28          //Calculate the sale price by subtracting
29          // the discount from the regular price.
30          salePrice = regularPrice - discountedPrice;
31
32
33          // Display the results
34          System.out.println("Regular price: $" + regularPrice);
35          System.out.println("Discounted price:$" + discount);
36          System.out.println("Sale price:$" + salePrice);
37
38      }
39
40  }
```

Output from the code

```
Sale price:$47.2
Regular price: $59.0
Discounted price:$0.2
Sale price:$47.2

Can only enter input while your progr
```

```java
public class BooksPerMonthVincentNguyen
{
    public static void books( )
    {
    int books = 15, // Number of books to read
    months = 6; // Number of months to read them

    double booksPerMonth; // Average books per month
    // Display the number of books I plan to
    // read and the number months in which I
    // plan to read them.

    System.out.print("I plan to read ");
    System.out.print(books + " books in ");
    System.out.println(months + " months.");

    // Calculate the average books per month.
    booksPerMonth = (double) books / months;
    // Display the average number of books per month.

    System.out.print("I will read an average of ");
    System.out.print(booksPerMonth);
    System.out.println(" books per month.");
```



We did three of the code from canvas

We looked at the contribution program

```java
/**
* Description
* This program calculates the amount of pay that
* will be contributed to a retirement plan if 5%,
* 8%, or 10 % of monthly pay is withheld.
* ref: pg __________
* @author Vincent Nguyen
* @version 09/03/24
*/
public class ContributionVincentNguyen
{
    public static void main(String[] args)
    {
    // Variables to hold the monthly pay and
    // the amount of contribution.
    int monthlyPay = 6000;
    double contribution;

    // Calculate and display a 5% contribution.
    contribution = monthlyPay * 0.05;
    System.out.println("5 percent is $" +
        contribution +
            " per month.");

```

```
        // Calculate and display a 8% contribution.
26      contribution = monthlyPay * 0.08;
27      System.out.println("8 percent is $" +
28      contribution +
29      " per month.");
30
31      // Calculate and display a 10% contribution.
32      contribution = monthlyPay * 0.1;
33      System.out.println("10 percent is $" +
34      contribution +
35      " per month.");
36      }
37  }
38  //Expected output ====================
39  //5 percent is $300.0 per month.
40  //8 percent is $480.0 per month.
41  //10 percent is $600.0 per month.
```