Exercise 1: Parameters output

- What two values are printed by each call below? Write them in the boxes provided.

```
public class MysteryNums {
    public static void main(String[] args) {
        int x = 15;
        sentence(x, 42);       // 15  42

        int y = x - 5;
        sentence(y, x + y);    // 10  25
    }

    public static void sentence(int num1, int num2) {
        System.out.println(num1 + " " + num2);
    }
}
```


Exercise 2: Parameter Mystery

- Fill in the boxes with the output that each method call would produce:

```
public class MysterySoda {
    public static void main(String[] args) {
        String soda = "coke";
        String pop = "pepsi";
        String coke = "pop";
        String pepsi = "soda";
        String say = pop;

        carbonated(soda, pop, pepsi);         // say pepsi not soda or coke
        carbonated(coke, soda, pop);          //
        carbonated(pop, pepsi, pepsi);        //
        carbonated("pop", pop, "koolaid");    //
        carbonated(say, "say", pop);          //
    }
    public static void carbonated(String coke, String soda, String pop) {
        System.out.println("say " + soda + " not " + pop + " or " + coke);
    }
}
```

Exercise 3: Parameter Mystery

- Fill in the boxes with the output that each method call would produce:

```
public class MysteryNumbers {
    public static void main(String[] args) {
        String one = "two";
        String two = "three";
        String three = "1";
        int number = 20;

        sentence(one, two, 3);                  // three times two = 6
        sentence(two, three, 14);               // 1 times three = 28
        sentence(three, three, number + 1);     // 1 times 1 = 42
        sentence(three, two, 1);                // three times 1 = 2
        sentence("eight", three, number / 2);   // 1 times eight = 20
    }
    public static void sentence(String three, String one, int number) {
        System.out.println(one + " times " + three + " = " + (number * 2));
    }
}
```


Exercise 4: Parameter Mystery

- Fill in the boxes with the output that each method call would produce:

```
public class Mystery {
    public static void main(String[] args) {
        String hear = "bad";
        String song = "good";
        String good = "hear";
        String walk = "talk";
        String talk = "feel";
        String feel = "walk";
        claim(feel, song, feel);        // to walk the walk is good
        claim(good, hear, song);        // to hear the good is bad
        claim(talk, "song", feel);      // to feel the walk is song
        claim("claim", talk, walk);     // to claim the talk is feel
    }

    public static void claim(String hear, String good, String song) {
        System.out.println("to " + hear + " the " + song + " is " + good);
    }
}
```


Syntax:

```
public class methods {
  public static void main(String[] args) {
      double bubble = 867.5309;
      double x = 10.01;
      int z = 0;
      printer(x, z);
```

```
        printer(x);
        printer("barack", "obama");
        System.out.println("z = " + z);
    }

    public static void printer(double x, int z) {
        System.out.println("x = " + x + " and z = " + z);
    }

    public static void printer(double x) {
        System.out.println("x = " + x);
    }

    public static void printer(String str1, String str2) {
        System.out.println("String 1: " + str1 + ", String 2: " + str2);
    }
}
```

Exercise 6:

```
public class methods {
    public static void main(String[] args) {
        printGrid(4, 6);
    }

    public static void printGrid(int row, int col) {
        for(int i = 1; i <= row; i++) {
            int end = i + row * (col - 1);
            for(int j = i; j <= end; j += row) {
                System.out.print(j);
                if(j != end) {
                    System.out.print(", ");
                }
            }
            System.out.println();
        }
    }

}
```

Exercise 7:

```java
public class methods {
   public static void main(String[] args) {
       printSquare(3, 6);
   }

   public static void printSquare(int min, int max) {
       for (int i = min; i <= max; i++) {
           for (int j = i; j <= max; j++) {
               System.out.print(j);
           }
           for (int k = min; k < i; k++) {
               System.out.print(k);
           }
           System.out.println();
       }
   }
}
```

BJP2

Exercise 1 - Math expressions

Write the results of each expression. Use the proper type (such as `.0` for a `double`). *Note that a variable's value changes only if you re-assign it using the = operator.* Discuss any errors you make with your neighbor.

```
double grade = 2.7;
Math.round(grade);                                  // grade = 2.7
grade = Math.round(grade);                          // grade = 3.0

double min = Math.min(grade, Math.floor(2.9));      //   min = 2.0

double x = Math.pow(2, 4);                          //     x = 16.0
x = Math.sqrt(64);                                  //     x = 8.0

int count = 25;
Math.sqrt(count);                                   // count = 25
count = (int) Math.sqrt(count);                     // count = 5

int a = Math.abs(Math.min(-1, -3));                 //     a = 3
```


Area finder:

```java
import java.util.Scanner;

public class Methods {
```

```
    public double area(double radius) {
        return Math.pow(radius, 2) * Math.PI;
    }
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        Methods areafinder = new Methods();
        System.out.print("Enter the desired radius: ");
        double r = scanner.nextDouble();
        System.out.println(areafinder.area(r));
    }
}
```

Salary finder:

```
import java.util.Scanner;
public class TASalary {
    public double calculatePay(double pay, double hours) {
        double overtime = 0;
        if (hours > 8) {
            overtime = hours - 8;
            hours -= overtime;
        }
        return (pay * hours) + (pay * 1.5 * overtime);
    }
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        TASalary salaryFinder = new TASalary();
        System.out.print("Enter your pay: ");
        double p = scanner.nextDouble();
        System.out.print("Enter your hours worked: ");
        double h = scanner.nextDouble();
        System.out.println(salaryFinder.calculatePay(p, h));
    }
}
```