

# Chapter 1-2 Review

Monday, September 24, 2012  
7:53 AM

Computer Science

Chapter 1-2 Review

Name: \_\_\_\_\_

1. Circle the following identifiers (variable names) that are valid in Java.

~~t/is~~ ~~it is~~ ~~it is~~ ~~it is~~ ~~it is~~ ~~it is~~  
~~it is~~ ~~/it is~~ ~~it is~~

2. What does this print? How many lines of text are produced? 4

```
System.out.println("Hello");
System.out.print("How are you today" + "Ted?");
System.out.println("I hope well");
System.out.println("Goodbye for now");
```

Hello  
How are you today Ted? I hope well  
Goodbye for now

3. What does this print? How many lines of text are produced? 3

```
System.out.println("1x3\tx3\nfwd\fs\nes\tas");
```

1x3    x3  
fwd\fs  
es    as

4. What would be stored in the variables after each assignment statement?

```
double a = 6 / 4;
int b = 6 / 4;
double c = 6.0 / 4;
int d = 6.0 / 4;
```

*Handwritten: 1.0, 1, 1.5, Error!*

~~int x = 3.5;~~  
double y = 103;

5. What would be stored in the variables after each assignment statement?

```
double a = (double)(6 / 4);
int b = (int)(6 / 4);
double c = (int)(6.0 / 4);
int d = (int)(6.0 / 4);
```

*Handwritten: 1.0, 1, 1.0, 1*

double c = (int)(1.0/4);  
double c = (int)(1.5);  
double c = 1

6. What would be the results of the following variables in Java?

```
int a = (10 + 10) / 4 * 6 - 5;
int b = (10 + 10) - 4 / 2 + 3;
int c = 100 / 30 / 2;
int d = 16 % 3;
int e = 10 * 3 % 12;
```

*Handwritten: 20/4\*6-5=5, 20-4/2+3=21, 100/30/2=3, 16%3=1, 10\*3%12=6*

20/4\*6-5=5  
20-4/2+3=21  
100/30/2=3  
16%3=1  
10\*3%12=6

7. What would print for each of the following?

```
System.out.println("The answer is: " + 5 + 10);
System.out.println(5 + 10 + " is the answer.");
```

"The answer is: 5" + 10  
The answer is 510

15 + " is the answer"  
15 is the answer

```

class java.lang.String
• int length()
• String substring(int from, int to) // returns the substring beginning at from
// and ending at to-1
• String substring(int from) // returns substring(from, length())
• int indexOf(String str) // returns the index of the first occurrence of str;
// returns -1 if not found
• int compareTo(String other) // returns a value < 0 if this is less than other
// returns a value = 0 if this is equal to other
// returns a value > 0 if this is greater than other

class java.lang.Math
• static int abs(int x)
• static double abs(double x)
• static double pow(double base, double exponent)
• static double sqrt(double x)
• static double random() // returns a double in the range [0.0, 1.0)

```

8. What would print for this statement?

```
System.out.println(Math.pow(Math.sqrt(4), Math.abs(5-8)));
```

$\text{pow}(2, 3)$  3

9. What would each of these statements print?

```
String s = "OPRF in Oak Park, IL";
```

- a)  $\text{System.out.println}(s.\text{substring}(5, 9));$  in O  
 b)  $\text{System.out.println}(s.\text{substring}(15));$  K, IL  
 c)  $\text{System.out.println}(s.\text{indexOf}("P"));$  1  
 d)  $\text{System.out.println}(s.\text{indexOf}("X"));$  -1  
 e)  $\text{System.out.println}(s.\text{substring}(s.\text{length}()-2));$  IL  
 f)  $\text{System.out.println}(s.\text{indexOf}(s.\text{substring}(0,1) + "a"));$  8

$s.\text{indexOf}("O"+"a")$

10. These statements would produce random integers in what range?

```
int x = (int) (Math.random() * 5) + 3;
int y = (int) (Math.random() * 10) + 101;
```

$\text{101-110}$

#### Sample Free Response:

Write a code snippet that would ask for two numbers from the keyboard (with prompts) and print the product of the numbers. (no need for the static void main and all of that stuff, just the guts of the code)

```

System.out.println("Please enter a number ");
int x = keyboard.nextInt();
System.out.println("Please enter a number ");
int y = keyboard.nextInt();
System.out.println("The answer is: " + (x*y));

```