

Quiz 2 Review

Name: Key 9/8/21

Finish before class starts Wednesday. After school Monday I will post a worked-out key on my web site for you to check answers and/or get help before class starts. I also can help you during Tutorial Tuesday.

1. Store the absolute value of integer n in double variable x:

```
int n = scan.nextInt();
double x = Math.abs(n);
```

2. Write code to store the square root of integer n in the double variable x:

```
int n = scan.nextInt();
double x = Math.sqrt(n);
```

3. Write code to raise integer n to the 5th power in double variable x:

```
int n = scan.nextInt();
double x = Math.pow(n, 5);
```

4. Write code to store a random integer between -10 and 10 inclusive in x:

```
int x = (int)(Math.random()*21) - 10;
```

5. Write code to store a random integer between 12 and 15 inclusive in x:

```
int x = (int)(Math.random()*4)+12;
```

6. Write code to store a random even integer between 4 and 10 inclusive in x.

```
2 to 5
int x = (int)(Math.random()*4) + 2;
x = x * 2;
```

7. Given a properly initialized String variable **str** containing at least 2 characters, write code to store a copy of str in a new String str2 that is missing the last character. For example the String "dog" would be saved as "do" in str2, and "Friday" would be saved as "Frida".

Write your code for problem 7 here:

```
String str2 = str.substring(0,
str.length() - 1);
```

written out on one line:

```
String str2 = str.substring(0, str.length() - 1);
```

8. Complete the following method which is meant to return a String created using Strings a and b where String b is inserted exactly in the middle of String a. Assume String a has an even number of characters and is at least 2 characters long. Example: sending over "spooky" and "cat" returns "spocatoky".

```
public String mashup(String a, String b)
{
    int mid = a.length()/2;
    return a.substring(0, mid) + b + a.substring(mid);
}
```

(continued on back)

Questions 9 through 17 use this class:

```
public class Frog
{
    private int location;

    public Frog()
    {
        location=0;
    }

    public void hop()
    {
        location++;
    }

    public int getLocation()
    {
        return location;
    }
}
```

12. Fill in the blanks to create an accurate statement:

The object frankie is an instance of Frog

14. True/False:

frankie is an instance of object Frog  
class

16. True/False:

Object frankie has an attribute location

18. Complete the following method which is meant to return a String made up of the first and last characters of String a. Assume String a is 2 or more characters long.

```
public String startAndEnd(String a)
{
    return a.substring(0,1) + a.substring(a.length()-1);
}
```

19. Complete the following method which is meant to return a random integer between integers a and b inclusive.

```
public int randomizer(int a, int b)
{
    return (int)(Math.random()*(b-a+1)) + a;
}
```

9. Write a line of code that creates a new Frog object named "frankie":

```
Frog frankie = new Frog();
```

10. Write a line of code that makes frankie hop forward one space.

```
frankie.hop();
```

11. Write a line of code that prints frankie's location.

```
System.out.println(frankie.getLocation());
```

13. Fill in the blanks to create an accurate statement:

The class Frog has an attribute location

15. True/False:

Frog is an instance of class frankie

17. What is printed by the following code?

```
Frog hubba = new Frog();
hubba.hop();
hubba.hop();
hubba.hop();
System.out.println(hubba.getLocation());
```

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