

Chapter 1 Review

Multiple Choice

Identify the choice that best completes the statement or answers the question.

_____ 1. What is output by the code below?

```
System.out.println( Math.sqrt(121) );
```

- a. 12
- b. 10
- c. 10.0
- d. 11.0
- e. 11

_____ 2. What is output by the code below?

```
System.out.println( Math.floor(9.1) );
```

- a. 6.0
- b. 10.0
- c. 10
- d. 9.0
- e. 9

_____ 3. What is output by the code below?

```
System.out.println( Math.pow(6,2) );
```

- a. 30.0
- b. 25.0
- c. 12.0
- d. 36.0
- e. 27.0

_____ 4. What is output by the code below?

```
int x = 9,  
y = 11;  
int z = x + y;  
double a = z;  
System.out.print(a);
```

- a. 8
- b. 9
- c. 17
- d. 17.0
- e. 20.0

_____ 5. What is output by the code below?

```
System.out.println( (int)Math.pow( Math.sqrt(40),2) );
```

- a. 40.5
- b. 80
- c. 40
- d. 36.0
- e. 27

_____ 6. What is output by the code below?

```
System.out.println( 7 / 0 );
```

- a. 0
- b. 7
- c. 0.7
- d. 27
- e. There is no output due to a runtime error.

_____ 7. What is output by the code below?

```
int x = 15;  
x = x % 5;  
System.out.print(x);
```

- a. 0
- b. 1
- c. 2
- d. 3
- e. 5

_____ 8. What is output by the code below?

```
System.out.print( (double)2 / 2 );
```

- a. 1
- b. 1.0
- c. 2
- d. 0
- e. 3

_____ 9. What is output by the code below?

```
System.out.print(3.0 / 6 + 3 * 3.5);
```

- a. 11.0
- b. 10.5
- c. .18
- d. 12.25
- e. 1.17

_____ 10. What is output by the code below?

```
System.out.println( Math.floor(-6.7) );
```

- a. -6.0
- b. -7.0
- c. -8.0
- d. -9.0
- e. -27.0

_____ 11. What is output by the code below?

```
System.out.println( Math.max(Math.min(16,18),17) );
```

- a. 0
- b. 16
- c. 17
- d. 18
- e. 19

____ 12. Consider the method go below that should return the sum of the parameters a and b.

```
public double go( double a, double b )
{
    /* blank */
}
```

Which of the following could correctly fill /* blank */ ?

- I. return a + b;
- II. return a - b;
- III. return a * b;

- a. I only
- b. II only
- c. III only
- d. I and III only
- e. II and III only

____ 13. Consider the method go below that should return the product of the parameters a and b.

```
public double go( double a, double b )
{
    /* blank */
}
```

Which of the following could correctly fill /* blank */ ?

- I. return a + b;
- II. return a - b;
- III. return a * b;

- a. I only
- b. II only
- c. III only
- d. I and III only
- e. II and III only

- _____ 14. Consider the method go below that should return the perimeter of rectangle. The formula for perimeter of rectangle is $:: 2 \times \text{length} + 2 \times \text{width}$

```
public double go( int len, int wid )
{
    /* blank */
}
```

Which of the following could correctly fill `/* blank */` ?

- I. `return 2 * len * wid;`
- II. `return 2 * (len + wid);`
- III. `return 2 * len + 2 * wid;`

- a. I only
- b. II only
- c. III only
- d. I and III only
- e. II and III only

- _____ 15. Consider the class and client code below.

```
public class Aplus
{
    public double go( double a )
    {
        return a * 3;
    }

    public double fun( double b )
    {
        return go( b ) + b;
    }
}
```

```
//client code in another class
Aplus x = new Aplus();
System.out.println( x.go(3) );
```

- a. 9.0
- b. 3.0
- c. 6.0
- d. 8.0
- e. 12.0

____ 16. Consider the class and client code below.

```
public class Aplus
{
    public double go( double a )
    {
        return a * 3;
    }

    public double fun( double b )
    {
        return go( b ) + b;
    }
}

//client code in another class
Aplus x = new Aplus();
System.out.println( x.fun(2) );
```

- a. 9.0
- b. 3.0
- c. 6.0
- d. 8.0
- e. 12.0

____ 17. Consider the class and statements that follow.

```
public class Money
{
    private double amount;

    public Money(double am)
    {
        amount = am;
    }

    public void addQuarters(int q)
    {
        amount += q * 0.25;
    }

    public void addDimes(int d)
    {
        amount += d * 0.1;
    }

    public double getAmount()
    {
        return amount;
    }
}
```

What is the output of the code below?

```
Money m = new Money(2.1);
m.addDimes(7);
m.addQuarters(7);
m.addDimes(2);
System.out.println(m.getAmount());
```

- a. 2.1
- b. 2.65
- c. 5.05
- d. 4.75
- e. 18.1

____ 18. What is a method?

- a. a tool that helps organize a program
- b. a tool that complicates a program
- c. a tool that makes a program longer
- d. a tool that makes a program harder to read
- e. a tool that makes a program more disorganized

____ 19. **When writing a method, you must always have an open and close what ?**

- a. parenthesis
- b. brace
- c. bracket
- d. A and B only
- e. A, B, and C

____ 20. **How many methods does class CS contain?**

```
public class CS
{
    public void one()
    {
        System.out.print("one");
    }
}
```

- a. 1
- b. 2
- c. 3
- d. 4
- e. 0

____ 21. **What is output by the code below?**

```
public class CS
{
    public void one()
    {
        System.out.print("one");
    }
}
```

```
//code in the main of another class
CS test = new CS();
test.one();
```

- a. one
- b. oneone
- c. oneoneone
- d. oneoneoneone
- e. oneoneoneoneone

_____ 22. What is output by the code below?

```
public class CS
{
    public void one()
    {
        System.out.print("one");
    }
}
```

//code in the main of another class

```
CS test = new CS();
test.one();
test.one();
test.one();
test.one();
```

- a. one
- b. oneone
- c. oneoneone
- d. oneoneoneone
- e. oneoneoneoneone

_____ 23. What is output by the code below?

```
public class CS{
    public void one(){
        System.out.print("one");
    }
}
```

//code in the main of another class

```
CS test = new CS();
test.one();
test.one();
```

- a. one
- b. oneone
- c. oneoneone
- d. oneoneoneone
- e. oneoneoneoneone

____ 24. What is output by the code below?

```
public class CS
{
    public void one()
    {
        System.out.print("one");
    }
}
```

//code in the main of another class

```
CS test = new CS();
test.one();
test.one();
test.one();
test.one();
test.one();
```

- a. one
- b. oneone
- c. oneoneone
- d. oneoneoneone
- e. oneoneoneoneone

____ 25. **How many methods does class CS contain?**

```
public class CS
{
    public void one()
    {
        System.out.print("one");
    }

    public void two()
    {
        System.out.print("two");
    }

    public void go()
    {
        two();
        one();
    }
}
```

- a. 1
- b. 3
- c. 2
- d. 4
- e. 5

____ 26. What is output by the code below?

```
public class CS
{
    public void one()
    {
        System.out.print("one");
    }

    public void two()
    {
        System.out.print("two");
    }
}
```

//code in the main of another class

```
CS test = new CS();
test.two();
test.one();
test.two();
test.one();
```

- a. one
- b. onetwo
- c. twoonetwoone
- d. onetwoonetwo
- e. onetwoonetwoone

____ 27. What is output by the code below?

```
public class CS
{
    public void one()
    {
        System.out.print("one");
    }

    public void two()
    {
        System.out.print("two");
        one();
    }
}
```

//code in the main of another class

```
CS test = new CS();
test.one();
test.two();
test.two();
```

- a. one
- b. onetwo
- c. onetwoone
- d. onetwoonetwo
- e. onetwoonetwoone

____ 28. **How many methods does class Dog contain?**

```
public class Dog
{
    public void barkOnce()
    {
        System.out.print("woof");
    }

    public void barkTwice()
    {
        barkOnce();
        barkOnce();
    }
}
```

- a. 0
- b. 1
- c. 2
- d. 3
- e. 4

____ 29. Consider the class and statements that follow.

```
public class Dog
{
    public void barkOnce()
    {
        System.out.print("woof");
    }

    public void barkTwice()
    {
        barkOnce();
        barkOnce();
    }
}
```

Given the declaration below, which of the following are valid statements?

```
Dog d = new Dog();
```

I.

```
d.barkOnce();
```

II.

```
d.barkTwice();
```

III.

```
System.out.println( d.barkTwice() );
```

- a. I only
- b. II only
- c. III only
- d. I and II only
- e. II and III only

____ 30. Consider the class and statements that follow.

```
public class Dog
{
    private void barkOnce()
    {
        System.out.print("woof");
    }

    private void barkTwice()
    {
        barkOnce();
        barkOnce();
    }
}
```

Given the declaration below, which of the following are valid statements?

`Dog d = new Dog();`

I.

`d.barkOnce();`

II.

`d.barkTwice();`

III.

`System.out.println(d.barkTwice());`

- a. I only
- b. II only
- c. III only
- d. I and II only
- e. none of the these statements are valid