Note: Correct responses are based on Java, **J2sdk v 1.8.x**, from Sun Microsystems, Inc. All provided code segments are intended to be syntactically correct, unless otherwise stated (i. e. `error` is an answer choice) and any necessary Java 2 Standard Packages have been imported. Ignore any typographical errors and assume any undefined variables are defined as used. **For all output statements, assume that the System class has been statically imported…** ***import static java.lang.System.*;***

QUESTION 1

What is 10111_2 - 10101_2 ?

A. 01010_2 B. 5_{10} C. 20_8 D. 2_6 E. 110_2

QUESTION 2

What is output by the code to the right?

A. 22 B. 12
C. 46 D. 9
E. 0

```
int g = 40;
g-=28;
out.println(g);
```

QUESTION 3

What is output by the code to the right?

A saplus B. aplus
C. saplusc D. aplusss
E 5

```
String str="apluscompsci";
int s=5;
out.println
("s" + str.substring(0,s));
```

QUESTION 4

What is output by the code to the right?

A. 15 c B. 14 i
C. 13 c D. 14 c
E. 14 s

```
String str="compsciaprocks";
str=str.replaceAll("o","i");
out.print(str.length()+ " ");
out.println(str.charAt(5));
```

QUESTION 5

What is output by the code to the right?

A. true false B. true true
C. false true D. false false
E. There is no output due to a syntax error.

```
boolean f=false;
boolean t=true;
out.println
(!(f||t&&t&&f)+ " " +(f&&t||t||f));
```

QUESTION 6

What is output by the code to the right?

A. [6,7,8,9,10] B. {6,7,8,9,10}
C. [6][7][8][9][10] D. "6,7,8,9,10"
E. 6,7,8,9,10

```
int[] f={6,7,8,9,10};
out.println(Arrays.toString(f));
```

QUESTION 7

What is the output by the code to the right?

A. 103 B. 99
C. 110 D. 115
E. 107

```
int y=17;
int f=5;
for(int g=10;g<y;y--)
{
  f+=y;
}
out.println(f);
```

QUESTION 8

What is the output by the code to the right?

A. 89 46656.0

B. 8 46656.0

C. 89

D.46656.0

E. 8

```
int w=6;
 if(w<11)
   out.print(w+2);
 else if(w<10)
   out.println(w+3);
 if(w==6)
   out.println(" " + Math.pow(w,w));
```

QUESTION 9

What is the output by the code to the right ?

A. 20 B. 8

C. 5 D. 3

E. 6

```
int x=8;
x+=8;
x/=4;
x-=2;
out.println(x*4);
```

QUESTION 10

Which values of variables a, b, and c will make this expression true ?

A. false true false B. false false false

C. true true true D. false true true

E. false false true

```
(a^b*c)
```

QUESTION 11

What is the output by the code to the right ?

A. 9.0 B. 3.0

C. 27.0 D. 6.0

E. 33.0

```
out.print(Math.pow(Math.min(3,4)
                   ,Math.max(2,3)));
```

QUESTION 12

What is the output by the code to the right ?

A. 4.6 B.4.6547839

C. 4.0 D.4.655

E. 4

```
double d=4.6547839;
out.printf("%3.3f",d);
```

QUESTION 13

How many lines are output by the code at right ?

A. 5 B. 2

C. 8 D. 4

E. 3

```
out.print("aplus");
out.println("compsci\n");
out.println("rocks");
```

QUESTION 14

What is the output by the code to the right ?

A. 5 B. 2

C. 8 D. 4

E. 7

```
int[][] g={{3,2,3},{6,5,6},{9,8,9}};
out.println(g[2][1]);
```

QUESTION 15

What is the output by the code to the right ?

A. 0123456789
B. 12345678910
C. 1123571219
D. 1122334455
E. 0987654321

```
for(int g=1;g<=10;g++)
{
  out.print(g)
}
```

QUESTION 16

What is the output by the code to the right ?

A. basketba
B. ball
C. basketball
D. basketbal
E. basketa

```
String s="basketball";
out.print(s.substring(s.indexOf("b"),
s.lastIndexOf("b"))+s.charAt(1));
```

QUESTION 17

What is the output by the code to the right ?

A. 6
B. 24
C. 8
D. 2
E. 36

```
out.println(4<<7&5|8);
```

QUESTION 18

What is the output by the code to the right ?

A. true true
B. true false
C. false true
D. false false
E. There is no output due to a syntax error.

```
out.print((false&(true^false))||(true
^(true&true))+" ");

out.print(""+(true&true|false&true));
```

QUESTION 19

What is the output by the code to the right ?

A. 1
B. 2
C. 5
D. 9
E. 8

```
Stack<Integer> b;
b = new Stack<Integer>();
for(int y=0;y<10;y++)
{
  b.push(y);
}
out.print(b.pop()+" ");
```

QUESTION 20

What is the output by the code to the right ?

A. 2
B. 13
C. 7
D. 6
E. 10

```
out.println(45%9+6*3/9);
```

QUESTION 21

What is the output by the code to the right ?

A. 9876543210
B. 123456789
C. 87654321
D. 876543210
E. There was no output due to a runtime error.

```
int k=9;
while(k>0)
{
  k--;
  out.print(k);
}
```

QUESTION 22

What can replace **<1*>** in the code to the right?

A. `double`
B. `cost`
C. `c`
D. `i`
E. `55.67`

QUESTION 23

What could replace **<2*>** in the code to the right?

A. `ammo`
B. `equals`
C. `a`
D. `b`
E. `Ship`

QUESTION 24

Assuming that **<1*>** and **<2*>** are filled correctly, what is the output by `// line 1` ?

A. `ENEMIES WIN`
B. `70`
C. `YOU WIN`
D. `90`
E. This is no output due to a runtime error.

QUESTION 25

Assuming that **<1*>** and **<2*>** are filled correctly, what is the output by `//line 2` ?

A. `ENEMIES WIN`
B. `70`
C. `YOU WIN`
D. `90`
E. This is no output due to a runtime error.

```
public class Ship {
  int size;
  double cost;
  int ammo;

    public Ship(int s,double c,int a)
   {
     size=s;
     <1*>=c;
     ammo=a;
    }

    public void addAmmo(int y){
     ammo+=y;
    }

    public void shoot(int g){
     ammo-=g;
    }

    public void battle(int num){
     while(num>0 && ammo>0){
        ammo--;
        num--;
     }
     if(num>ammo){
    System.out.print("ENEMIES WIN ");
     }
     else{
        System.out.print("YOU WIN ");
     }
    }

    public int getAmmo(){
     return ammo;
    }

   }


//////////////////////////////////
Ship a=new Ship(70,20000.00,90);
<2*>.battle(20);            //line 1
a.battle(90);               //line 2
```

QUESTION 26

What is the output by the code to the right ?

A. `7`
B. `8`
C. This is no output due to a runtime error.
D. This is no output due to a syntax error.
E. This is no output due to an infinite loop.

```
int r=10;
for(int h=0;h<r;h--)
{
  r--;
}
out.print(r);
```

QUESTION 27

What is the output by the code to the right ?

A. `abcde` B. `abcdef`

C. `bcdef` D. `bcdefg`

E. This is no output due to a syntax error.

```
char[] b=new char[6];
for(int y=0;y<6;y++)
{
  b[y]=(char)(y+'a');
}
out.println(b);
```

QUESTION 28

How many stars will be present in String `s` ?

A. `7` B. `8`

C. `6` D. `0`

E. This is no output due to a syntax error.

```
String s="";
for(int y=1;y<100;y*=2)
{
  s+='*';
}
```

QUESTION 29

What is returned by the call `recur(7)` ?

A. `3` B. `9`

C. `6` D. `14`

E. `8`

QUESTION 30

What is returned by the call `recur(9)` ?

A. `3` B. `9`

C. `6` D. `14`

E. `8`

```
public static int recur(int y)
{
  if(y<4)
     return(2);
  return recur(y-3)+6;
}
```

QUESTION 31

What is $1001111_2 - 45_8$?

A. 42_8 B. 41_6 C. 43_{10} D. 110_6 E. 0_{123}

QUESTION 32

What is the output by the code to the right ?

A. `87` B. `120`

C. `162` D. `163`

E. `164`

```
BigInteger b=new BigInteger("77");
b.add(new BigInteger("12"));
b=b.add(new BigInteger("87"));
out.println(b);
```

QUESTION 33

What is the output of line `//1` in the code to the right ?

A. `cookie` B. `4`

C. `orange` D. `grapes`

E. `donut`

QUESTION 34

What is the output of line `//2` in the code to the right ?

A. `43` B. `6`

C. `12` D. `4`

E. `9`

```
TreeMap<String,Integer> red;
red = new TreeMap<String,Integer>();
red.put("donut",4);
red.put("chicken",8);
out.print(red.remove("donut"));  //1
red.put("cookie",9);
red.put("orange",43);
red.remove("orange");
red.put("grapes",12);
red.put("apples",6);
out.print(red.get("cookie"));    //2
red.remove("apples");
```

QUESTION 35

What is the output by line `//1` ?

A. `3`

B. `BANANAS`

C. `apples`

D. This is no output due to a syntax error.

E. This is no output due to a runtime error.

```
TreeSet<String> blue;
blue = new TreeSet<String>();
blue.put("BANANAS");
blue.put("apples");
blue.put("12345");
out.print(blue.get(0));    //1
```

QUESTION 36

What is the output of line `//1` ?

A. `false`

B. `14`

C. `12`

D. `11`

E. `22`

QUESTION 37

What is the output of line `//2` ?

A. `{11,22,12,13}`

B. `{11,13,12,14,22}`

C. `{11,14,12,12}`

D. `{11,14,13,12}`

E `.11,22`

```
PriorityQueue<Integer> yellow;
yellow = new
          PriorityQueue<Integer>();

yellow.add(12);
yellow.add(13);
yellow.add(11);
yellow.remove(1);
yellow.add(14);
yellow.remove(1);
out.print(yellow.remove(1));  //1
yellow.add(22);
out.print(yellow);          //2
```

QUESTION 38

What is the output by the code to the right

A.`10` B. `71` C. `1` D. `8` E. `0`

```
out.print((8|79>>7&1)&11);
```

QUESTION 39

What is the output

A. `\\\\\\`

B. `"\"\`

C. `\"\\\\\\\"`

D. `"\\\""\\\"`

E. `\\\`

```
String s="\"\\n\\n\\\"";
String[] str=s.split("n");
out.print(str[0]+str[0]);
```

QUESTION 40

A. `1011`

B. `11`

C. `10`

D. `5+6`

E. `10+11`

```
if(true)
  out.print(5+5);
out.print(5+6);
```