Recursion Test 1 key

1. What is returned by the method call: **rec(4)** ?

```
public int rec(int n)
{
    if(n <= 1)
        return 1;
    else
        return n + rec(n - 1);
}
```

   a. 4   d. 10

   b. 1   e. -1

   c. 24

2. What is returned by the method call: **recurs (7)** ?

```
public int recurs(int n)
{
    int result = 0;
    if(n <= 3)
        result = 2;
    else
        result = recurs(n - 2) + (n - 2);
    return result;
}
```

   a. 10   d. 7

   b. 2   e. 20

   c. 4

3. Consider the following method.

```
public int rec(int n)
{
    if(n <= 1)
        return 0;
    else
        return n + rec(n - 1) + rec(n - 2);
}
```

What value does **rec(5)** return?

   a. 0   d. 21

   b. 5   e. 38

   c. 11

4. Consider the following method.

```java
public int go(int a, int b)
{
    if(a > b)
        return a;
    else
        return b + go(a+1, b-1);
}
```

What value does **go(3, 6)** return?

a. 5   d. 23
b. 16   e. 38
c. 9

5. Consider the following method.

```java
public String loopy(String s, int x)
{
    if( x <= 0 )
        return s;
    else
        return x + s + loopy(s, x - 2);
}
```

Which of the following is output as a result of the call **loopy("", 5).**

a. 531-1   d.135
b. 531   e. 135531
c. -1135

6. Consider the following method.

```java
public int rec(int n)
{
    if(n <= 1)
        return 1;
    else if(n % 2 == 0)
        return n - rec(n - 1);
    else
        return n + rec(n - 1);
}
```

What value does **rec(8)** return?

a. 0   d. 12
b. 1   e. 33
c. 8