Select the correct definition of recursion.

A. Java code that invokes a method in the same class in which the calling method resides.
B. Java code that invokes a method in another class, which then calls back to the original class.
C. Java code that invokes the method in which the calling code itself resides.
D. Java code that causes a stack overflow by calling itself in an infinite loop.

What does the recursive code below print when called with \(i = 1234, j = 5\)?

```
public int compute(int i, int j) {
    // base case
    if (i < j) return i;
    // recursion call
    return compute(i - j, j);
}
```

A. 1  
B. 2  
C. 3  
D. 4  
E. 5  

What does the recursive code below print when called with \(value = 10\)?

```
public static int compute(int value) {
    if (value == 0) return 0;
    int term = value;
    return term + compute(value - 2);
}
```

A. 28  
B. 20  
C. 30  
D. stack overflow
What does the recursive code below print when called with value = 10?

```java
System.out.println(compute(10));

public static int compute(int value) {
    if (value == 0) return 0;
    int term = value;
    return term + compute(value - 2);
}
```

A. 28  
B. 20  
C. 30  
D. stack overflow

What does the recursive code below print when called with value = 9?

```java
System.out.println(compute(9));

public static int compute(int value) {
    if (value == 0) return 0;
    int term = value;
    return term + compute(value - 2);
}
```

A. 28  
B. 20  
C. 30  
D. stack overflow

What does the recursive code below print when called with value = 9?

```java
System.out.println(compute(9));

public static int compute(int value) {
    if (value == 0) return 0;
    int term = value;
    return term + compute(value - 2);
}
```