

- 1) What does the following code 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);  
}
```

- 2) What does the recursive code below print when called with  $value = 10$  ?

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

- 3) What does the recursive code below print when called with  $value = 9$  ?

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

- 4) What does the recursive code below print when called with  $d = 100.0$  and  $n = 6$ ?

```
public static double compute(double d, int n) {
    // base case
    if (n == 0) return 0.0;
    // compute term
    double term = d;
    // recursion call
    return term + compute(d / 10.0, n - 1);
}
```

- 5) What does the recursive code below print when called with  $s = \text{"aabbccddeeff"}$ ?

```
public static String munge(String s) {
    if (s == null || s.length() <= 1) // base case
        return s;
    else if (s.charAt(0) == s.charAt(1))
        return munge(s.substring(1, s.length()));
    else
        return s.charAt(0) +
            munge(s.substring(1, s.length()));
}
```

- 6) What does the recursive code below print when called with  $\text{number} = 13$  and  $\text{base} = 2$ ?

```
public static void convert(int number, int base) {
    int remainder = number % base;
    int quotient = number / base;
    if (quotient > 0) convert(quotient, base);
    System.out.print(remainder);
}
```