

R6.3 What do these code snippets print?

a. `int result = 0;
for (int i = 1; i <= 10; i++) { result = result + i; }
System.out.println(result);`

b. `int result = 1;
for (int i = 1; i <= 10; i++) { result = i - result; }
System.out.println(result);`

c. `int result = 1;
for (int i = 5; i > 0; i--) { result = result * i; }
System.out.println(result);`

d. `int result = 1;
for (int i = 1; i <= 10; i = i * 2) { result = result * i; }
System.out.println(result);`

R6.7 What do these loops print?

a. `for (int i = 1; i < 10; i++) { System.out.print(i + " "); }`

b. `for (int i = 1; i < 10; i += 2) { System.out.print(i + " "); }`

c. `for (int i = 10; i > 1; i--) { System.out.print(i + " "); }`

d. `for (int i = 0; i < 10; i++) { System.out.print(i + " "); }`

e. `for (int i = 1; i < 10; i = i * 2) { System.out.print(i + " "); }`

f. `for (int i = 1; i < 10; i++) { if (i % 2 == 0) {
System.out.print(i + " "); } }`

R6.10 What is an "off-by-one" error? Give an example from your own programming experience.

R6.11 What is a sentinel value? Give a simple rule when it is appropriate to use a numeric sentinel value.

R6.6 Provide trace tables for these loops. (skip exercise a)

b.
`int i = 0;
int j = 0;`

```
int n = 0;
while (i < 10)
{
    i++;
    n = n + i + j;
    j++;
}
```

c.

```
int i = 10;
int j = 0;
int n = 0;
while (i > 0)
{
    i--;
    j++;
    n = n + i - j;
}
```

d.

```
int i = 0;
int j = 8;
int n = 0;
while (i != j)
{
    i = i + 2;
    j = j - 2;
    n++;
}
```