Consider the following code segment in which the int variable x has been properly declared and initialized.

```java
if (x % 2 == 1)
{
    System.out.println("YES");
}
else
{
    System.out.println("NO");
}
```

Assuming that x is initialized to the same positive integer value as the original, which of the following code segments will produce the same output as the original code segment?

I.

```java
if (x % 2 == 1)
{
    System.out.println("YES");
}
if (x % 2 == 0)
{
    System.out.println("NO");
}
```

II.

```java
if (x % 2 == 1)
{
    System.out.println("YES");
}
else if (x % 2 == 0)
{
    System.out.println("NO");
}
else
{
    System.out.println("NONE");
}
```

III.

```java
boolean test = x % 2 == 0;
if (test)
{
    System.out.println("YES");
}
else
{
    System.out.println("NO");
}
```