Input	Expected Result	Rationale
1	“1”	Close-to-boundary
0	“0”	Boundary case
1234567	“1,234,567”	Routine case
80000000024	“80,000,000,024”	Routine case, many zeroes
9182839482103823091830	“9,182,839,482,103,823,091,830”	Large case
999	“999”	Largest case without a comma
1000	“1,000”	Smallest case with a comma

```
import static org.junit.Assert.*;
import org.junit.Test;

public class toStringWithCommasTest {

	@Test
	public void test1() {
		NaturalNumber n = new NaturalNumber2(“1”);
		NaturalNumber nExpected = new NaturalNumber2(n);
		String case = toStringWithCommas(n);
		String caseExpected = “1”;

		assertEquals(nExpected, n);
		assertEquals(caseExpected, case);
	}

	@Test
	public void test0() {
		NaturalNumber n = new NaturalNumber2(“0”);
		NaturalNumber nExpected = new NaturalNumber2(n);
		String case = toStringWithCommas(n);
		String caseExpected = “0”;

		assertEquals(nExpected, n);
		assertEquals(caseExpected, case);
	}
```

```
@Test
public void test1234567() {
        NaturalNumber n = new NaturalNumber2(“1234567”);
        NaturalNumber nExpected = new NaturalNumber2(n);
        String case = toStringWithCommas(n);
        String caseExpected = “1,234,567”;

        assertEquals(nExpected, n);
        assertEquals(caseExpected, case);
}

@Test
public void test80000000024() {
        NaturalNumber n = new NaturalNumber2(“80000000024”);
        NaturalNumber nExpected = new NaturalNumber2(n);
        String case = toStringWithCommas(n);
        String caseExpected = “80,000,000,024”;

        assertEquals(nExpected, n);
        assertEquals(caseExpected, case);
}


@Test
public void test9182839482103823091830() {
        NaturalNumber n = new NaturalNumber2(“9182839482103823091830”);
        NaturalNumber nExpected = new NaturalNumber2(n);
        String case = toStringWithCommas(n);
        String caseExpected = “9,182,839,482,103,823,091,830”;

        assertEquals(nExpected, n);
        assertEquals(caseExpected, case);
}

@Test
public void test999{
        NaturalNumber n = new NaturalNumber2(“999”);
        NaturalNumber nExpected = new NaturalNumber2(n);
        String case = toStringWithCommas(n);
        String caseExpected = “999”;

        assertEquals(nExpected, n);
        assertEquals(caseExpected, case);
```

```
    }

    @Test
    public void test1000{
        NaturalNumber n = new NaturalNumber2(“1000”);
        NaturalNumber nExpected = new NaturalNumber2(n);
        String case = toStringWithCommas(n);
        String caseExpected = “1,000”;

        assertEquals(nExpected, n);
        assertEquals(caseExpected, case);
    }
}
```