import java.lang.Math;

public class TestDouble {

public static void main(String[] args) {

System.out.println(Math.sqrt(3.0));

System.out.println((float)Math.sqrt(3.0));

System.out.println(Math.pow(2,23));

}

}

Results:

1.7320508075688772

1.7320508

8388608.0

If the standard word size is a total of 32 bits. We use 1 bit to represent the sign of the integer and then 8 bits (1 byte) to represent the exponent. That’s 9 bits used so far. 9 of our 32 bits are used, this means that we have 23 bits left, which is the number of bits in the mantissa.