

```
1 package prob03;
2
3 class Problem03
4 {
5     public static void main(String args[])
6     {
7         int a = 2147483647;
8         byte b = 127;
9
10        // prints out the binary value 10111 in decimal (23)
11        System.out.println(0B10111);
12        // prints out the octal value 345 in decimal (229)
13        System.out.println(0345);
14        // prints out the hex value 0xABCD in decimal (43981)
15        System.out.println(0xABCD);
16        // prints out the integer division of 1 and 3, which is 0
17        System.out.println(1/3);
18        // prints out the double division of 1 and 3, which is
19        0.3333333333333333
20        System.out.println(1/3.0);
21        // prints out the double division of 1 and 3, which is
22        0.3333333333333333
23        System.out.println(1.0/3);
24        // prints out the float division of 1 and 3, which is
25        0.33333334
26        System.out.println(1.0f/3.0F);
27        // prints out the scientific notation as regular double
28        (1.23123)
29        System.out.println(123.123E-2);
30        // prints out a, (2147483647)
31        System.out.println(a);
32        // prints out b, (127)
33        System.out.println(b);
34        // overflow the byte by one.
35        b = (byte) (b+1);
36        // prints -128 due to the overflow
37        System.out.println(b);
38        // overflow the int by one.
39        a = (int) (a+1);
40        // prints out -2147483648 due to the overflow
41        System.out.println(a);
42        // take (128 + 127) and convert to byte
43        b = (byte) ((-b)+127);
44        // prints that conversion (which is -1)
```

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41      System.out.println(b);
42      // take (-2147483648 + 2147483647) and convert to int
43      a = (int) ((-a)+2147483647);
44      // prints that conversion (which is -1)
45      System.out.println(a);
46      // set a and b back to initial value.
47      a = 2147483647;
48      b = 127;
49      // take 127 + 1270 and put it into a byte
50      b = (byte) (b+1270);
51      // print out that number (117)
52      System.out.println(b);
53      // take 2147483647 + 2147483647 and put it into an int
54      a = (int) (a+2147483647);
55      // print out that number (-2)
56      System.out.println(a);
57  }
58 }
```