



Team Contest

Reference

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Team:

System.out.println(42);

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$n$	Runtime $100 \cdot 10^6$ in 3s
[10, 11]	$\mathcal{O}(n!)$
$< 22$	$\mathcal{O}(n2^n)$
$\leq 100$	$\mathcal{O}(n^4)$
$\leq 400$	$\mathcal{O}(n^3)$
$\leq 2.000$	$\mathcal{O}(n^2 \log n)$
$\leq 10.000$	$\mathcal{O}(n^2)$
$\leq 1.000.000$	$\mathcal{O}(n \log n)$
$\leq 100.000.000$	$\mathcal{O}(n)$

byte (8 Bit, signed): -128 ...127

short (16 Bit, signed): -32.768 ...23.767

integer (32 Bit, signed): -2.147.483.648 ...2.147.483.647

long (64 Bit, signed):  $-2^{63} \dots 2^{63} - 1$

MD5: cat <string>| tr -d [:space:] | md5sum

# 1 Java Knowhow

## 1.1 System.out.printf() und String.format()

Syntax: %[flags][width][.precision][conv]

**flags:**

- left-justify (default: right)
- + always output number sign
- 0 zero-pad numbers
- (space) space instead of minus for pos. numbers
- , group triplets of digits with ,

**width** specifies output width

**precision** is for floating point precision

**conv:**

- d byte, short, int, long
- f float, double
- c char (use C for uppercase)
- s String (use S for all uppercase)

## 1.2 Speed up IO

```
Use BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
```

```
Use Double.parseDouble(Scanner.next())
```