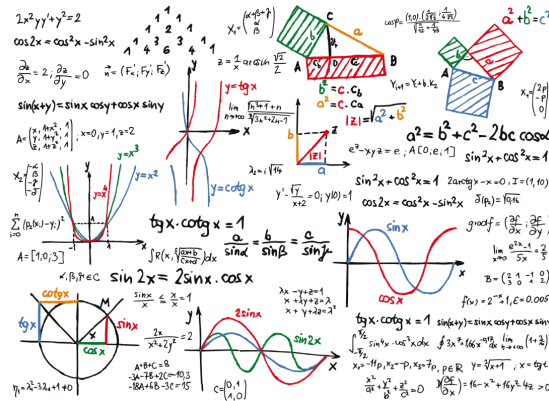


# B4 - Mathematics

B-MAT-400

## 201yams

Rolling dice like god



# 201yams

binary name: 201yams

language: everything working on "the dump"

compilation: when necessary, via Makefile, including re, clean and fclean rules



- The totality of your source files, except all useless files (binary, temp files, obj files,...), must be included in your delivery.
- All the bonus files (including a potential specific Makefile) should be in a directory named *bonus*.
- Error messages have to be written on the error output, and the program should then exit with the 84 error code (0 if there is no error).

Every Sunday you play Yams (a.k.a. Yahtzee) with your grandmother. You have decided to cheat your way to victory by developing a software that will give you the chances to obtain a given combination on the next dice roll.

The different combinations are:

- a pair (at least 2 dice of the same value),
- a three-of-a-kind (at least 3 dice of the same value),
- a four-of-a-kind (at least 4 dice of the same value),
- a full house (one pair and one three-of-a-kind),
- a straight (5 dice of sequential value),
- a yahtzee (5 dice of the same value).

A combination is defined by its kind (pair, three-of-a-kind, four-of-a-kind, full-house, straight or yahtzee) and its value (for a full-house, the value of the three-of-a-kind then the value of the pair, for the straight, the value of the highest die).



## USAGE

```
Terminal
~/B-MAT-400> ./201yams -h
USAGE
  ./201yams d1 d2 d3 d4 d5 c

DESCRIPTION
  d1      value of the first die (0 if not thrown)
  d2      value of the second die (0 if not thrown)
  d3      value of the third die (0 if not thrown)
  d4      value of the fourth die (0 if not thrown)
  d5      value of the fifth die (0 if not thrown)
  c       expected combination
```



The format of the expected combination parameter is one of the following: pair\_A; three\_A; four\_A; full\_A\_B; straight\_A; yams\_A

## EXAMPLES

```
Terminal
~/B-MAT-400> ./201yams 0 0 0 0 0 yams_4
Chances to get a 4 yams: 0.01%
```

```
Terminal
~/B-MAT-400> ./201yams 1 2 3 4 5 four_4
Chances to get a 4 four-of-a-kind: 1.62%
```

```
Terminal
~/B-MAT-400> ./201yams 2 2 5 4 6 straight_6
Chances to get a 6 straight: 16.67%
```

```
Terminal
~/B-MAT-400> ./201yams 0 0 0 0 0 full_2_3
Chances to get a 2 full of 3: 0.13%
```

```
Terminal
~/B-MAT-400> ./201yams 2 3 2 3 2 full_2_3
Chances to get a 2 full of 3: 100.00%
```