Zrnko múdrosti

> Should array indices start at 0 or 1? My compromise of 0.5 was rejected without, I thought, proper consideration.
>
> Stan Kelly-Bootle

Hash Code

1.	Junaci z Duboveho haja		49 190 808
2.	Blue Vision Labs	United Kingdom / GDG London	48 698 774
3.	"; DROP TABLE TEAMS;--	Slovakia / VacuumHub	47 909 028
4.	Baristas		45 594 562
5.	Martins & Co.	United Kingdom / University of Edinburgh - CompSoc	45 235 875
6.	**GigaStep**	**Slovakia / VacuumHub**	**45 202 318**
7.	Gympos	United Kingdom / Hackers At Cambridge	44 750 879
8.	pytomci	Slovakia / VacuumHub	44 007 106
9.	TrePe Team		42 576 298
10.	Finifugal fudgel(s) ¯_(ツ)_/¯		40 726 159

Dúfame, že postavíte študentský tím na IPSC 2018 (jún-júl)

Kto číta vaše kódy

(Moss = Measure Of Software Similarity)


```
            return 0;
        }
        return (int)Math.pow(2, pocetCislicVBin) - n;
    }

    public static int pocetMoznosti(int n){

        if(n == 0 || n == 1){
            return 1;
        }
        if(n > 1) {
            if(n%2==0) {
                return pocetMoznosti(n - 1) + pocetMoznosti(n / 2);
            }
            else{
                return pocetMoznosti(n - 2) + pocetMoznosti((n-1) / 2);
            }
        }

        return 0;
    }
//**************BONUS******************
    public static boolean sucet(int n){
        if(najmensiPocet(n) == 2){
            return true;
        }
        return false;
    }

    public static boolean rozdiel(int n){
        if(n < 2){
            return true;
        }
        for(int i = 0; n >= Math.pow(2, i); i++){
                if(((n + (int)Math.pow(2, i)) & (n + (int)Math.pow(2, i)-1)) == 0){
                    return true;
                }
            }
```

```
        public static int pocetMoznosti(int n) {
                int pocet = 0;
                if (n == 0) {
                        return 1;
                }

                if (n == 1) {
                        return 1;
                }
                if (n > 1) {
                        if (n%2 == 0) {
                                return pocetMoznosti(n-1) + pocetMoznosti(n/2);
                        }
                        else {
                                return pocetMoznosti(n-2) + pocetMoznosti((n-1)/2);
                        }
                }

                return pocet;
        }

// ----------------------BONUS--------------------------------

        public static boolean sucet(int n) {
                if (najmensiPocet(n) == 2) {
                        return true;
                }
                return false;
        }

        public static boolean rozdiel(int n) {
                if (n < 2) {
                        return true;
                }
                for (int i=0; n>=Math.pow(2,i); i++) {
                        if (((n+(int)Math.pow(2, i)) & (n+(int)Math.pow(2, i)-1)) == 0) {
                                return true;
```


```
public static int pocetMoznosti(int n){

    if (n == 0 || n == 1){
        return 1;
    }
    else if (n == 2){
        return 2;
    }
    int[] p = new int [n+1];
    p[0] = 1;
    p[1] = 1;
    p[2] = 2;
    if (n < 3){

        return p[n];
    }
    for (int i = 3; i < n+1; i++){
        p[i] = p[i-2] + p[i/2];
    }
    return p[n];
}
```

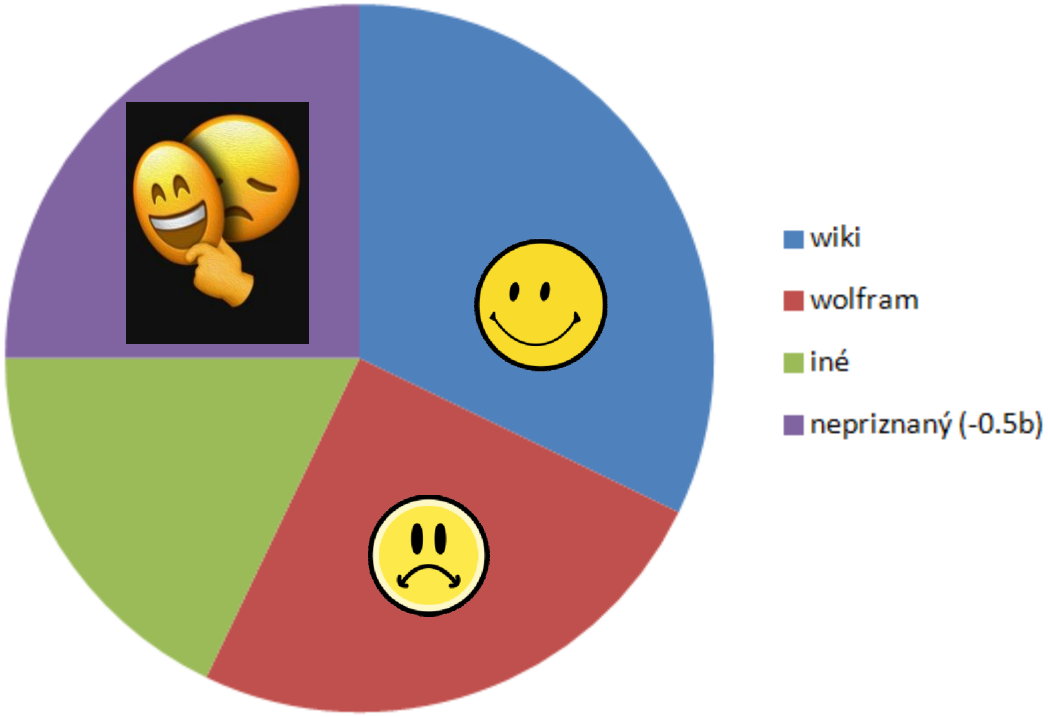
```
public static int pocetMoznosti(int n) {
        if (n == 0) {
                return 1;
        }

        else if (n == 1) {
                return 1;
        }
        else if (n == 2) {
                return 2;
        }
        int[] p = new int [n+1];
    p[0] = 1;
    p[1] = 1;
    p[2] = 2;

    for (int i = 3; i < n+1; i++){
        p[i] = p[i-2] + p[i/2];
    }
    return p[n];
}
```

ADŠ uvidentne nie je zdrojom:

- http://struct.input.sk/08.html#mincovka

O krájaní pizze

good artists copy,
great artists steal
Picasso




```
Lenže toto nie je umenie ale príšerne napísaný kód:
(int)((Math.pow(n, 4) - (6 * Math.pow(n, 3)) +
(23*Math.pow(n,2)) - (18*n) + 24)/24)
=
(n*n*n*n -6*n*n*n + 23*n*n - 18*n + 24)/24
=
((((n-6)*n+23)*n-18)*n+24)/24
=
(((n-6)*n+23)*n-18)*n/24+1
```

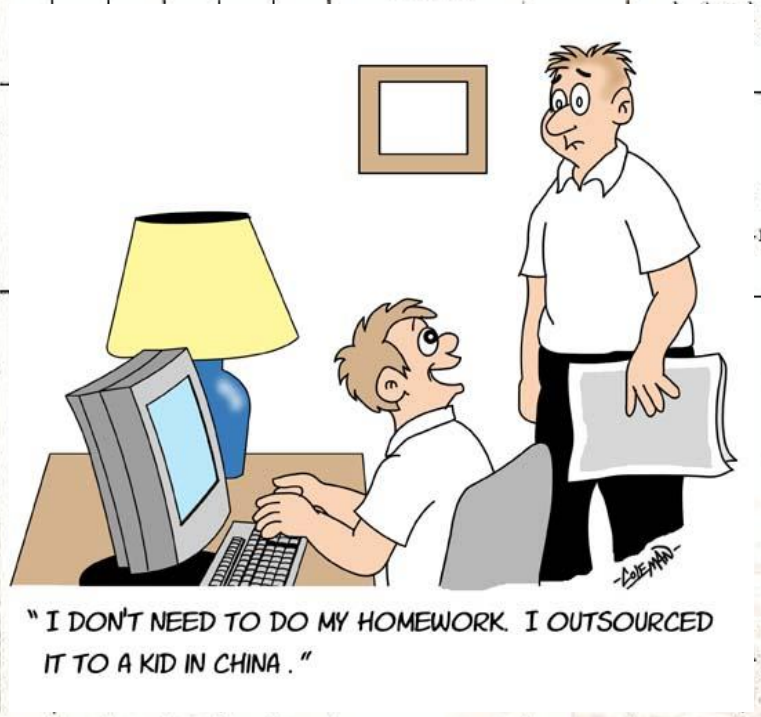
The Winner is (Animated Math):
http://www.3blue1brown.com/videos/2017/5/26/y4nc90ncml3r7kglv36szd72jlm90e

Diagram for the computation by the Engine of the Numbers of Bernoulli. See Note G. (page 722 *et seq.*)

Number of Operation.	Nature of Operation.	Variables acted upon.	Variables receiving results.	Indication of change in the value on any Variable.	Statement of Results.	Data.			Working Variables.										
						$^1V_1$ 0 0 0 1 [1]	$^1V_2$ 0 0 0 2 [2]	$^1V_3$ 0 0 0 4 [n]	$^0V_4$ 0 0 0 0 [ ]	$^0V_5$ 0 0 0 0 [ ]	$^0V_6$ 0 0 0 0 [ ]	$^0V_7$ 0 0 0 0 [ ]	$^0V_8$ 0 0 0 0 [ ]	$^0V_9$ 0 0 0 0 [ ]	$^0V_{10}$ 0 0 0 0 [ ]	$^0V_{12}$ 0 0 0 0 [ ]	$^0V_{13}$ 0 0 0 0 [ ]	$^0V_{14}$ 0 0 0 0 [ ]	B_7
1	×	$^1V_2 \times ^1V_3$	$^1V_4, ^1V_5, ^2V_6$	$\left\{\begin{matrix} ^1V_2 = ^1V_2 \\ ^1V_3 = ^1V_3 \end{matrix}\right\}$	$= 2n$	...	2	n	$2n$	$2n$	$2n$								
2	−	$^1V_4 - ^1V_1$	$^2V_4$	$\left\{\begin{matrix} ^2V_4 = ^2V_4 \\ ^1V_1 = ^1V_1 \end{matrix}\right\}$	$= 2n-1$	1	...	...	$2n-1$										
3	+	$^1V_5 + ^1V_1$	$^2V_5$	$\left\{\begin{matrix} ^2V_5 = ^2V_5 \\ ^1V_1 = ^1V_1 \end{matrix}\right\}$	$= 2n+1$	1	...	...	...	$2n+1$									
4	+	$^2V_5 \div ^2V_4$	$^2V_{11}$	$\left\{\begin{matrix} ^2V_5 = ^0V_5 \\ ^2V_4 = ^0V_4 \end{matrix}\right\}$	$= \frac{2n-1}{2n+1}$	...	...	...	0	0	...	...	...	...	...	$\frac{2n-1}{2n+1}$			
5	÷	$^2V_{11} \div ^1V_2$	$^2V_{11}$	$\left\{\begin{matrix} ^2V_{11} = ^2V_{11} \\ ^1V_2 = ^1V_2 \end{matrix}\right\}$	$= \frac{1}{2} \cdot \frac{2n-1}{2n+1}$	...	2	...	...	...	...	...	...	...	...	$\frac{1}{2} \cdot \frac{2n-1}{2n+1}$			
6	−	$^0V_{13} - ^2V_{12}$	$^1V_{12}$	$\left\{\begin{matrix} ^2V_{11} = ^0V_{11} \\ ^0V_{13} = ^1V_{13} \end{matrix}\right\}$	$= -\frac{1}{2} \cdot \frac{2n-1}{2n+1} = A_0$	...	...	...	...										$= A_0$
7	−	$^1V_3 - ^1V_2$	$^1V_{10}$	$\left\{\begin{matrix} ^1V_3 = ^1V_3 \\ ^1V_1 = ^1V_1 \end{matrix}\right\}$	$= n-1\ (=3)$	1	...	n	...										
8	+	$^2V_7 + ^0V_7$	$^1V_7$	$\left\{\begin{matrix} ^1V_7 = ^1V_7 \\ ^0V_7 = ^1V_7 \end{matrix}\right\}$	$= 2 + 0 = 2$	...	2	...	...										
9	÷	$^1V_6 \div ^1V_7$	$^2V_{11}$	$\left\{\begin{matrix} ^1V_6 = ^1V_6 \\ ^0V_{11} = ^2V_{11} \end{matrix}\right\}$	$= \frac{2n}{2} = A_1$	...	...	...	...										
10	×	$^2V_{21} \times ^2V_{11}$	$^1V_{12}$	$\left\{\begin{matrix} ^1V_{21} = ^2V_{21} \\ ^2V_{11} = ^2V_{11} \end{matrix}\right\}$	$= B_1 \cdot \frac{2n}{2} = B_1 A_1$	...	...	...	...									B_1	
11	+	$^1V_{12} + ^1V_{13}$	$^2V_{13}$	$\left\{\begin{matrix} ^1V_{12} = ^0V_{12} \\ ^1V_{13} = ^2V_{13} \end{matrix}\right\}$	$= -\frac{1}{2} \cdot \frac{2n-1}{2n+1} + B_1 \cdot \frac{2n}{2}$ ...	...	...	...	...									$B_1 \cdot \frac{2n}{2}$	
12	−	$^1V_{10} - ^1V_1$	$^2V_{10}$	$\left\{\begin{matrix} ^1V_{10} = ^2V_{10} \\ ^1V_1 = ^1V_1 \end{matrix}\right\}$	$= n-2\ (=2)$	1	...	...	...										
13	−	$^2V_6 - ^1V_1$	$^2V_6$	$\left\{\begin{matrix} ^1V_6 = ^2V_6 \\ ^1V_1 = ^1V_1 \end{matrix}\right\}$	$= 2n-1$	1	...	...	...										
14	+	$^1V_1 + ^1V_7$	$^2V_7$	$\left\{\begin{matrix} ^1V_1 = ^1V_1 \\ ^1V_7 = ^2V_7 \end{matrix}\right\}$	$= 2 + 1 = 3$	1	...	...	...										
15	+	$^2V_6 + ^2V_7$	$^1V_8$	$\left\{\begin{matrix} ^2V_6 = ^2V_6 \\ ^2V_7 = ^2V_7 \end{matrix}\right\}$	$= \frac{2n-1}{3}$	...	...	...	...										
16	×	$^1V_8 \times ^2V_{11}$	$^4V_{11}$	$\left\{\begin{matrix} ^1V_8 = ^0V_8 \\ ^2V_{11} = ^4V_{11} \end{matrix}\right\}$	$= \frac{2n}{2} \cdot \frac{2n-1}{3}$	...	...	...	...										
17	−	$^2V_6 - ^1V_1$	$^3V_6$	$\left\{\begin{matrix} ^2V_6 = ^3V_6 \\ ^1V_1 = ^1V_1 \end{matrix}\right\}$	$= 2n-2$	1	...	...	...										
18	+	$^1V_1 + ^2V_7$	$^3V_7$	$\left\{\begin{matrix} ^2V_7 = ^3V_7 \\ ^1V_1 = ^1V_1 \end{matrix}\right\}$	$= 3 + 1 = 4$	1	...	...	...										
19	÷	$^3V_6 \div ^3V_7$	$^4V_9$	$\left\{\begin{matrix} ^3V_6 = ^3V_6 \\ ^3V_7 = ^3V_7 \end{matrix}\right\}$	$= \frac{2n-2}{4}$	...	...	...	...										
20	×	$^1V_9 \times ^4V_{11}$	$^5V_{11}$	$\left\{\begin{matrix} ^1V_9 = ^0V_9 \\ ^4V_{11} = ^5V_{11} \end{matrix}\right\}$	$= \frac{2n}{2} \cdot \frac{2n-1}{3} \cdot \frac{2n-2}{4} = A_3$	...	...	...	...										
21	×	$^1V_{22} \times ^3V_{11}$	$^0V_{12}$	$\left\{\begin{matrix} ^1V_{22} = ^1V_{22} \\ ^0V_{12} = ^2V_{12} \end{matrix}\right\}$	$= B_3 \cdot \frac{2n}{2} \cdot \frac{2n-1}{3} \cdot \frac{2n-2}{3} = B_3 A_3$	...	...	...	...									.....	B_3
22	+	$^2V_{12} + ^2V_{13}$	$^3V_{13}$	$\left\{\begin{matrix} ^2V_{12} = ^0V_{12} \\ ^2V_{13} = ^3V_{13} \end{matrix}\right\}$	$= A_0 + B_1 A_1 + B_2 A_2$	...	...	...	...									$B_2 A_2$	
23	−	$^2V_{10} - ^1V_1$	$^3V_{10}$	$\left\{\begin{matrix} ^2V_{10} = ^3V_{10} \\ ^1V_1 = ^1V_1 \end{matrix}\right\}$	$= n-3\ (=1)$	1	...	...	...										

Here follows a repetition of Operations thirteen to twenty-three.

24	+	$^4V_{13} + ^0V_{24}$	$^1V_{24}$	$\left\{\begin{matrix} ^4V_{13} = ^0V_{13} \\ ^0V_{24} = ^1V_{24} \end{matrix}\right\}$	$= B_7$	...	...	...	...	...	...	...	...	...	...	.....	.....	.....	.....	.....	B_7
25	+	$^1V_1 + ^1V_3$	$^1V_3$	$\left\{\begin{matrix} ^1V_1 = ^1V_1 \\ ^1V_3 = ^1V_3 \\ ^5V_6 = ^0V_6 \\ ^5V_7 = ^0V_7 \end{matrix}\right\}$	$= n+1 = 4+1 = 5$ ..... by a Variable-card. by a Variable-card.	1	...	$n+1$	...	...	0	0								



http://cdn.history.com/sites/2/2015/12/Diagram_for_the_computation_of_Bernoulli_numbers.jpg