The Results

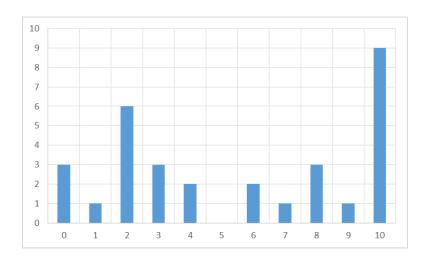
Problem 8

I type letters at random in my keyboard. Each letter I type is equally likely to be any of the 26 (lowercase) letters of the alphabet, chosen independently of what has been typed before. I stop typing when I type the letter 'a' three times in succession (that is, with no other letter in between). What is the expected number of times I type the letter 'b'?

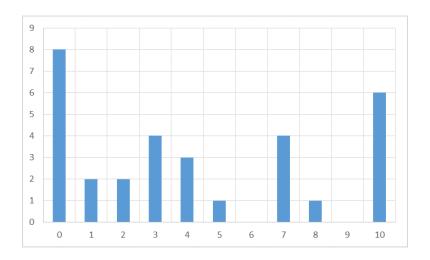
Teams and Universities

| KU | Lang en exact op plaats 1 |
|----------|--|
| KU/UGent | Tous Ensemble |
| RU | Een integer team LOst MInds LIMOncello De homogene hetero's Timonade Simonade |
| RUG | Euler's Secret Finding Limo The Trivial Group Joint Spectrum of Measurable Bananas |
| TUD | Baire with us \understand \und |
| TUe | sample teamname Dit team wordt gesponsord door Saskia en Tim IQuation |
| UT | MintUT De wijzen uit het oosten |
| UU | TWIN(FO) masterrace |
| UVA | Blauw Krijt Strikt kleiner dan 3 De Viergroep van Gemiddelde Lengte $\tau > \pi$ Mückenheim Transfinity Gooooodeveninggoodevening |

Histogram for Problem 2



Histogram for Problem 8



Histogram for Problem 12

3rd place

3rd place

TWIN(FO) masterrace (70 points)

2nd place

2nd place

LOst MInds (71 points)

1st place

1st place

Mückenheim Transfinity (72 points)

The Results

| 2 | Ranking | Team | University | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Total |
|---|---------|--|------------|----|----|----|----|---|---|----|----|----|----|----|----|-------|
| 3 | 1 | Mückenheim Transfinity | UVA | 9 | 10 | 9 | 10 | 2 | 3 | 6 | 10 | 10 | 3 | 0 | 0 | 72 |
| 4 Lang en exact op plaats 1 KU 4 10 9 8 0 1 3 3 6 6 4 0 0 4 5 6 6 8 1 0 1 8 1 0 0 0 4 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 | 2 | LOst MInds | RU | 10 | 4 | 7 | 6 | 5 | 3 | 10 | 10 | 9 | 7 | 0 | 0 | 71 |
| Tous Ensemble KU/UGent 9 10 9 6 0 0 6 1 5 0 0 0 0 4 | 3 | TWIN(FO) masterrace | UU | 10 | 10 | 7 | 9 | 2 | 6 | 2 | 10 | 0 | 4 | 10 | 0 | 70 |
| 6 Baire with us | 4 | Lang en exact op plaats 1 | KU | 4 | 10 | 9 | 8 | 0 | 1 | 3 | 3 | 6 | 4 | 0 | 0 | 48 |
| 6 | 5 | | KU/UGent | 9 | 10 | 9 | 6 | 0 | 0 | 6 | 1 | 5 | 0 | 0 | 0 | 46 |
| 6 Goooooodeveninggoodevening UVA 2 2 2 9 8 0 0 0 6 10 8 0 0 0 4 9 Dit team wordt gesponsord door Saskia en Tim TUe 10 10 9 0 1 3 5 3 0 3 0 0 0 4 10 10 10 10 10 10 10 10 10 10 10 10 10 | 6 | Baire with us | TUD | 8 | 10 | 1 | 10 | 1 | 0 | 6 | 4 | 5 | 0 | 0 | 0 | 45 |
| 9 Dit team wordt gesponsord door Saskia en Tim 10 Blauw Krijt 10 Blauw Krijt 10 UVA 8 0 6 8 4 4 0 2 8 2 1 0 0 3 110 Euler's Secret RUG 10 6 0 2 2 3 0 10 1 1 0 0 0 3 113 Een integer team RU 4 10 4 9 1 0 2 3 0 10 1 1 0 0 0 3 113 Een integer team RU 4 10 4 9 1 0 2 3 0 0 0 0 3 115 MintUT UT 10 3 5 0 0 3 0 7 0 2 0 0 3 116 Strikt kleiner dan 3 UVA 5 1 9 6 0 0 0 2 0 5 0 0 3 116 De wijzen uit het oosten 116 De wijzen uit het oosten 117 6 10 3 0 0 0 0 4 3 2 2 0 0 0 0 2 118 Timonade Simonade RU 9 2 8 5 1 1 2 0 0 0 0 0 0 2 119 Team Binomialcoefficientendriehoek 110 TUD 5 6 5 0 0 1 0 10 0 0 0 0 0 2 120 De homogene hetero's RU 4 2 6 2 1 0 0 7 2 1 0 0 0 0 121 Briljant bijna overal 110 TUD 6 8 4 1 1 0 4 0 0 0 0 0 0 0 0 0 0 0 122 Team 2 punten 123 De Viergroep van Gemiddelde Lengte 124 Joint Spectrum of Measurable Bananas RUG 5 0 10 1 1 0 2 2 1 0 0 0 0 0 2 126 Aleph,0 punten 110 TUD 10 10 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 6 | $\tau > \pi$ | UVA | 9 | 7 | 10 | 9 | 1 | 0 | 2 | 0 | 7 | 0 | 0 | 0 | 45 |
| Blauw Krijt | 6 | | UVA | 2 | 2 | 9 | 8 | 0 | 0 | 6 | 10 | 8 | 0 | 0 | 0 | 45 |
| 10 | 9 | Dit team wordt gesponsord door Saskia en Tim | TUe | 10 | 10 | 9 | 0 | 1 | 3 | 5 | 3 | 0 | 3 | 0 | 0 | 44 |
| 12 Euler's Secret RUG 10 6 0 2 2 2 3 0 10 1 1 1 0 0 3 3 13 Een integer team RU 4 10 4 9 1 0 2 3 0 0 0 0 0 3 15 15 MintUT UT 10 3 5 0 0 3 7 0 2 0 0 3 15 MintUT UT 10 3 5 0 0 3 0 7 0 2 0 0 3 15 MintUT UT 10 3 5 0 0 3 0 7 0 2 0 0 3 16 MintUT UT 10 3 5 0 0 3 0 7 0 2 0 0 0 3 16 MintUT UT 10 3 5 0 0 3 0 7 0 2 0 0 0 3 16 MintUT UT 10 3 5 0 0 0 0 0 0 0 0 0 | | | | 8 | - | 6 | 8 | 4 | 0 | 2 | - | 2 | 1 | 0 | 0 | 39 |
| 13 | | | TUe | 9 | 10 | 9 | 0 | 0 | 0 | 4 | 7 | 0 | 0 | 0 | 0 | 39 |
| 13 | | Euler's Secret | RUG | 10 | 6 | 0 | 2 | 2 | 3 | 0 | 10 | 1 | 1 | 0 | 0 | 35 |
| 15 MintUT UT 10 3 5 5 0 0 3 0 7 0 2 0 0 3 16 6 Strikk kleiner dan 3 UVA 5 1 9 6 0 0 0 2 0 5 0 0 2 16 5 0 0 2 16 6 De wijzen uit het oosten UT 6 10 3 0 0 0 4 3 2 0 0 0 0 2 16 5 0 0 0 2 16 6 De wijzen uit het oosten UT 6 10 3 0 0 0 4 3 2 0 0 0 0 2 16 5 0 0 0 2 16 5 0 0 0 0 2 16 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | | | | | | 4 | 9 | 1 | | | | 0 | 0 | 0 | | 33 |
| 16 | | | | | 8 | 8 | 0 | 1 | | 6 | 0 | 0 | | 0 | 0 | 33 |
| 16 De wijzen uit het oosten UT 6 10 3 0 0 0 4 3 2 0 0 0 2 16 Timonade Simonade RU 9 2 8 5 1 1 2 0 </td <td>15</td> <td>MintUT</td> <td>UT</td> <td>10</td> <td>3</td> <td>5</td> <td>0</td> <td>0</td> <td>3</td> <td>0</td> <td>7</td> <td>0</td> <td>2</td> <td>0</td> <td>0</td> <td>30</td> | 15 | MintUT | UT | 10 | 3 | 5 | 0 | 0 | 3 | 0 | 7 | 0 | 2 | 0 | 0 | 30 |
| 16 | | | | - | | | 6 | 0 | | 0 | | - | 5 | 0 | | 28 |
| 19 Team Binomiaalcoëfficiëntendriehoek TUD 5 6 5 0 0 1 0 10 0 0 0 0 2 20 De homogene hetero's RU 4 2 6 2 1 0 | | | | 6 | 10 | 3 | 0 | 0 | | | | 2 | 0 | 0 | | 28 |
| 20 | | | | 9 | 2 | 8 | 5 | 1 | 1 | 2 | - | 0 | 0 | 0 | 0 | 28 |
| 21 Briljant bijna overal TUD 6 8 4 1 1 0 4 0 0 0 0 0 0 2 | | | | 5 | 6 | 5 | 0 | 0 | 1 | 0 | | 0 | 0 | 0 | 0 | 27 |
| 22 Team 2 punten TUD 4 9 0 4 0 0 2 4 0 <td></td> <td></td> <td></td> <td>4</td> <td>_</td> <td>6</td> <td></td> <td></td> <td>0</td> <td>0</td> <td>7</td> <td>2</td> <td>1</td> <td>0</td> <td>-</td> <td>25</td> | | | | 4 | _ | 6 | | | 0 | 0 | 7 | 2 | 1 | 0 | - | 25 |
| 23 De Viergroep van Gemiddelde Lengte UVA 6 3 2 6 2 0 2 0 0 0 0 0 2 24 Joint Spectrum of Measurable Bananas RUG 5 0 10 1 1 0 2 1 0 <td></td> <td></td> <td></td> <td>6</td> <td>8</td> <td>4</td> <td>1</td> <td>1</td> <td>0</td> <td>4</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>24</td> | | | | 6 | 8 | 4 | 1 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 24 |
| 24 Joint Spectrum of Measurable Bananas RUG 5 0 10 1 1 0 2 1 0 0 0 0 0 0 2 25 Inducktie TUD 4 2 2 6 0 0 0 2 2 1 0 0 1 26 Aleph.0 punten TUD 10 4 4 0 0 0 0 0 0 0 0 0 0 0 27 Finding Limo RUG 4 8 0 0 0 0 4 0 1 0 1 0 0 1 | | | | | | | | - | | | | - | | | - | 23 |
| 25 Inducktie TUD 4 2 2 6 6 0 0 0 2 2 1 0 0 1 2 6 Aleph., D punten TUD 10 4 4 0 0 0 0 0 0 0 0 0 0 0 1 2 7 Finding Limo RUG 4 8 0 0 0 0 0 4 0 1 0 0 1 | | | | 6 | 3 | | 6 | 2 | 0 | | 0 | 0 | 0 | 0 | 0 | 21 |
| 26 Aleph,0 punten TUD 10 4 4 0 0 0 0 0 0 0 0 0 0 1 27 Finding Limo RUG 4 8 0 0 0 0 0 4 0 1 0 0 1 | | | | 5 | 0 | 10 | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 20 |
| 27 Finding Limo RUG 4 8 0 0 0 0 4 0 1 0 0 1 | | | | | 2 | | | | | - | | | | | | 19 |
| | | | | 10 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| | | | | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 17 |
| | 28 | \varnothing | TUD | 3 | 3 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| | | | | | | - | - | - | - | - | - | | - | - | - | 14 |
| | | | | | | - | - | - | - | - | | - | - | - | - | 13 |
| | 31 | sample teamname | | | | | | | | | | | | | | 32 7 |

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