**Yshorter length 6mill**

**L=30**

For r= 15, 12 and m=12 no results for enumeration with 2000 (all found).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Enumeration L=30, r=10 | | | | |
| m=10 | h=1000 (found all) | Succ = 137  = 13% | Enum time= 39 | Total time = 2740 |
| m=10 | h=1000 (found all) | Succ = 131  =13% | Enum time= 72 | Total time =2617 |
| M=10 | H=2000 (found all) | Succ = 522  =26% | Enum time= 538 | Total time =6921 |
| M=10 | H=2000 (found all) | Succ = 356  =17% | Enum time= 38 | Total time =5873 |
| M=10 | H=2000 (found all) | Succ = 660  =33% | Enum time= 1023 | Total time =7145 |
| M=8 | H=1000 (found all) | Succ = 132  =13% | Enum time= 0.21 | Total time =2328 |
| M=8 | H=1000 (found all) | Succ = 112  = 11% | Enum time= 0.35 | Total time =2318 |
| M=8 | H=1000 (found all) | Succ = 172  = 17% | Enum time= 2.5 | Total time =2795 |
| M=8 | H=1000 (found all) | Succ = 296  = 29% | Enum time= 0.2 | Total time =3466 |
|  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| Random, L=30, r=10 | | |
| Trials = 2000 | Succ = 760  = 38% | Elapsed time = 7916 |
| Trials = 100 | Succ = 37  = 37% | Elapsed time = 355 |
| Trials =2000 | Succ=755  =37% | Elapsed time =7636 |

**L = 20**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Enumeration L=20, r=6 | | | | |
| m=6 | h=100 (found all) | Succ = 0  = 0% | Enum time= 0.017 | Total time = 39 |
| m=6 | h=100 (found all) | Succ = 1  =1% | Enum time= 0.034 | Total time =39 |
| M=6 | h=1000 | Succ = 2  = 0.2% | Enum time = 0.056 | Total time = 329 |
| M=6 | H=1000 | Succ = 3  = 0.3% | Enum time = 0.032 | Total time = 371 |
| M=8 | H=1000 | Succ=3  = 0.3% | Enum time =0.22 | Total time=334 |
| M=8 | H=1000 | Succ=2  = 0.2% | Enum time=0.19 | Total time=305 |
| M=10 | H=1000 | Succ=0 | Enum time | Total time |
| M=10 | H=1000 | Succ=0 | Enum time | Total time |

For r = 8, zero successes in 100 trials (all found); zero random successes also in 100 trials

|  |  |  |
| --- | --- | --- |
| Random, L=20, r=6 | | |
| Trials = 100 | Succ = 0  = 0% | Elapsed time = 27 |
| Trials = 1000 | Succ = 10  = 1% | Elapsed time = 397 |
| Trials = 1000 | Succ=9  =0.9% | Elapsed time = 915 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Enumeration L=20, r=7 | | | | |
| m=8 | 1000 (found all) | Succ = 0 |  | 37 |
| Random: | 1000 | Succ =0 |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**halfY length 13mill**

**L=30**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Enumeration L=30, r=10 | | | | |
| m=10 | h=1000 (found all) | Succ = 57 =  5.7% | Enum time= 2.6 | Total time = 3183 |
| m=10 | h=1000 (found all) | Succ = | Enum time= | Total time = |
| m= | h= | Succ = | Enum time= | Total time = |
| m= | h= | Succ = | Enum time= | Total time = |
| m= | h= | Succ = | Enum time= | Total time = |
| m= | h= | Succ = | Enum time= | Total time = |
| m= | h= | Succ = | Enum time= | Total time = |

|  |  |  |
| --- | --- | --- |
| Random, L=30, r=10 | | |
| Trials = 1000 | Succ = 238  = 23.8% | Elapsed time = 5632 |
| Trials = | Succ = | Elapsed time = |
| Trials = | Succ= | Elapsed time = |

**halfY length 13mill**

**L=20**

L=20, r=6 no success for enumeration top 1000

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Enumeration L=20, r=5 | | | | |
| m=8 | h=1000 (found all) | Succ = 92 =  9% | Enum time= 0.191 | Total time = 2742 |
| m= | h=1000 (found all) | Succ = | Enum time= | Total time = |
| m= | h= | Succ = | Enum time= | Total time = |
| m= | h= | Succ = | Enum time= | Total time = |
| m= | h= | Succ = | Enum time= | Total time = |

|  |  |  |
| --- | --- | --- |
| Random, L=20, r=5 | | |
| Trials = 1000 | Succ = 188  = 18.8% | Elapsed time = |
| Trials = | Succ = | Elapsed time = |
| Trials = | Succ= | Elapsed time = |