**The Results and Discussion**

1. Experiment 1

We did *1000* times experiment for every *n*, and calculate the *mean of connections*, as shown in *Figure 1*.

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| --- | --- | --- | --- |
| N | Mean of Connections |  | Experiment times |
| 100 | 262.922 | 230.259 | 1000 |
| 200 | 588.799 | 529.832 | 1000 |
| 300 | 946.115 | 855.567 | 1000 |
| 1000 | 3740.25 | 3453.878 | 1000 |
| 10000 | 48985.898 | 46051.702 | 1000 |
| 20000 | 105226.293 | 99034.876 | 1000 |
| 40000 | 223258.104 | 211932.695 | 1000 |
| 51200 | 292260.512 | 277593.467 | 1000 |
| 102400 | 621350.582 | 590676.07 | 1000 |

*Figure 1 Comparison Between Connections and 1/2nlnn*

According to the table, with the increasing of *n* (number of sites), it shows that the *mean of connections* is close to , in the condition of 1000 experiment for every *n*.

1. Experiment 2

We calculate all *n* from *0-51200* to estimate the *Connection*, with *100* times for each *n*.

*Figure 2 Comparison Between Connection and 1/2 𝑛 lnn*

As we can see from *Figure 2*, *Mean of Connections* is close to .