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a) Each of the client's nodes contains 8 bytes of information and there are 50 nodes in the data set.:

formula to find density:

|  |
| --- |
| Density = (information bytes) / (total bytes)  = (n \* w) / ((n \* w) + (4n +4) |

To calculate the density as follows:



The density of  8 bytes of information and 50 nodes in the data set is 0.6622516545.

b) Each of the client's nodes contains 200 bytes of information and there are 1,000,000 nodes in the data set.:

formula to find density:

|  |
| --- |
| Density = (information bytes) / (total bytes)  = (n \* w) / ((n \* w) + (4n +4)  Or  Density = 1/(1+4/w) |

To calculate the density as follows:



Density of 200 bytes of information and there are 1,000,000 nodes in the data set.:

0.98039215686275.