

By comparing the 4 different operations performed on the data by these methods, the standard deviation is not significant enough to prove that any operation is more taxing than others. Any differences can likely be contributed to experimental error. Regarding the method of I/O, however, it is clear from the data that the function methods are by far the fastest because they are the easiest to call. Pipes are second, because they form a direct connection between parent and child through a simple file descriptor. However, sockets are very slow because the data must be sent over the network to reach the other process, which takes extra time even when staying on the same machine. This is illustrated in the table below, which shows the drastic contrast of performance between the 3 methods of data processing. As one would expect, the methods that require signals to physically travel farther are going to take a lot more time than those which don't require as much distance, like the function call.

Method	Number of Operations	Addition (ops/sec)	Subtraction (ops/sec)	Multiplication (ops/sec)	Division (ops/sec)
Function	1 billion	21894907.46	21856956.54	20325675.87	21254968.14
Pipe	1 million	120270.04	118071.98	114282.89	121854.14
Socket	1 million	7564.16	8123.16	8033.40	7466.74
RPC	1 million	N/A	N/A	N/A	N/A