Run the BASIC code below for each of the four specified cases, and fill in the table below. (You may translate into any other computer language, but don't blame me if you introduce bugs.) In each case, make the arrival rate to be 4 and the average service time 2.4 (so that the offered load is 4 x 2.4 = 9.6 erlangs); set the number of servers to be 10; and run the simulation for 10,000 arriving customers. Observe that all the answers in row 1 and row 2 are, in principle, equal.

1. Poisson arrivals, exponential service times.
2. Poisson arrivals, constant service times.
3. Constant interarrival times, exponential service times.
4. Constant interarrival times, constant service times.

	K/NSTOP	*AB/A*	*B(s,a)*
1			
2			
3			NA
4			NA

```
100  DIM C(50)              (50 is max number of servers)
110  INPUT S,NSTOP          (S,NSTOP = number of servers, customers to be
                             simulated)
120  FOR D=1 TO NSTOP
130  IA=                    (IA = interarrival time)
140  A=A+IA                 (A = arrival time)
150  J=0
160  J=J+1                  (J = index of server being probed)
170  IF J=S+1 THEN K=K+1    (K = number of customers that are blocked)
180  IF J=S+1 THEN 270
190  IF A<C(J) THEN 160     (C(J) = completion time for server J)
200  X=                     (X = service time)
210  C(J)=A+X
220  M=C(1)                 (M = shortest server-completion time)
230  FOR I=2 TO S
240  IF C(I)<M THEN M=C(I)
250  NEXT I
260  IF M>A THEN AB=AB+M-A  (AB = cumulative time during which all servers
                             busy)
270  NEXT D
280  PRINT K/NSTOP,AB/A     (fraction of customers blocked, fraction of
                             time all servers are simultaneously busy)
```