```
>list
100 dim c(50),a(1100)
107 s = 10
108 nstop = 1000000
110 input n
120 for d = 1 to nstop
130 in = 1
132 for i = 2 to n
134 if a(i) < a(in) then in = i
136 next i
137 ahat = 9.6/(n-9.6)
138 gamma = ahat/2.4
139 tt = (-1/gamma)*log(rnd(1))
140 clock = a(in)
145 a(in) = a(in)+tt
150 j = 0
160 j = j+1
170 if j = s+1 then k = k+1
180 if j = s+1 then 270
190 if clock < c(j) then 160
200 x = -2.4*log(rnd(1))
205 sx = sx+x
210 c(j) = clock+x
215 a(in) = a(in)+x
220 m = c(1)
230 for i = 2 to s
240 if c(i) < m then m = c(i)
250 next i
260 if m > clock then ab = ab+m-clock
270 next d
300 print "P10[",n,"]=",ab/clock," Pi(10)[",n,"]=",k/nstop," rho[",n,"]=",sx/clock/s
>run
? 10
P10[   10    ]=    0.665549       Pi(10)[      10    ]=    0       rho[   10    ]=    0.960112
>run
? 11
P10[   11    ]=    0.461827       Pi(10)[      11    ]=    0.255722       rho[   11    ]=    0.91958
>run
? 12
P10[   12    ]=    0.390058       Pi(10)[      12    ]=    0.257434       rho[   12    ]=    0.897174
>run
? 13
P10[   13    ]=    0.350094       Pi(10)[      13    ]=    0.251076       rho[   13    ]=    0.881698
>run
? 14
P10[   14    ]=    0.326344       Pi(10)[      14    ]=    0.246402       rho[   14    ]=    0.870262
>run
? 15
P10[   15    ]=    0.308706       Pi(10)[      15    ]=    0.241269       rho[   15    ]=    0.861156
>run
? 25
P10[   25    ]=    0.24421        Pi(10)[      25    ]=    0.217596       rho[   25    ]=    0.818084
>run
? 50
P10[   50    ]=    0.217578       Pi(10)[      50    ]=    0.207237       rho[   50    ]=    0.793274
>run
? 100
P10[   100   ]=    0.204579       Pi(10)[      100   ]=    0.200489       rho[   100   ]=    0.781327
>run
? 1000
P10[   1000   ]=    0.197115       Pi(10)[      1000   ]=    0.197521       rho[   1000   ]=    0.772598
```

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180 if j = s+1 then 270
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200 x = -2.4*log(rnd(1))
205 sx = sx+x
210 c(j) = clock+x
215 a(in) = a(in)+x
220 m = c(1)
230 for i = 2 to s
240 if c(i) < m then m = c(i)
250 next i
260 if m > clock then ab = ab+m-clock
270 next d
300 print "P10[",n,"]=",ab/clock," Pi(10)[",n,"]=",k/nstop," rho[",n,"]=",sx/clock/s
>save "hw4.bas"
>139 tt=-0.25*log(rnd(1))
>run
? 10
P10[   10    ]=    0.371935       Pi(10)[      10    ]=    0       rho[   10    ]=    0.905749
>run
? 11
P10[   11    ]=    0.580556       Pi(10)[      11    ]=    0.371178       rho[   11    ]=    0.943686
>run
? 12
P10[   12    ]=    0.69162        Pi(10)[      12    ]=    0.579896       rho[   12    ]=    0.961206
>run
? 13
P10[   13    ]=    0.759533       Pi(10)[      13    ]=    0.693252       rho[   13    ]=    0.97106
>run
? 14
P10[   14    ]=    0.802463       Pi(10)[      14    ]=    0.759244       rho[   14    ]=    0.976888
>run
? 15
P10[   15    ]=    0.834261       Pi(10)[      15    ]=    0.803829       rho[   15    ]=    0.981131
>run
? 25
P10[   25    ]=    0.935546       Pi(10)[      25    ]=    0.931134       rho[   25    ]=    0.993261
>run
? 50
P10[   50    ]=    0.974875       Pi(10)[      50    ]=    0.974091       rho[   50    ]=    0.997766
>run
? 100
P10[   100    ]=    0.988747       Pi(10)[      100    ]=    0.98847       rho[   100    ]=    0.999435
>run
```

```
? 1000

P10[    1000    ]=     0.9994   Pi(10)[       1000    ]=     0.998955        rho[   1000    ]=     1.008058
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108 nstop = 1000000
110 input n
120 for d = 1 to nstop
130 in = 1
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200 x = -2.4*log(rnd(1))
205 sx = sx+x
210 c(j) = clock+x
215 a(in) = a(in)+x
220 m = c(1)
230 for i = 2 to s
240 if c(i) < m then m = c(i)
250 next i
260 if m > clock then ab = ab+m-clock
270 next d
300 print "P10[",n,"]=",ab/clock," Pi(10)[",n,"]=",k/nstop," rho[",n,"]=",sx/clock/s
>200 x=2.4
>list
100 dim c(50),a(1100)
107 s = 10
108 nstop = 1000000
110 input n
120 for d = 1 to nstop
130 in = 1
132 for i = 2 to n
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137 ahat = 9.6/(n-9.6)
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190 if clock < c(j) then 160
200 x = 2.4
205 sx = sx+x
210 c(j) = clock+x
215 a(in) = a(in)+x
220 m = c(1)
230 for i = 2 to s
```

```
240 if c(i) < m then m = c(i)
250 next i
260 if m > clock then ab = ab+m-clock
270 next d
300 print "P10[",n,"]=",ab/clock," Pi(10)[",n,"]=",k/nstop," rho[",n,"]=",sx/clock/s
>run
? 10
P10[    10     ]=     0.37045        Pi(10)[       10     ]=     0       rho[   10     ]=     0.905819
>run
? 11
P10[    11     ]=     0.581274       Pi(10)[       11     ]=     0.371184        rho[   11     ]=     0.94377
>run
? 12
P10[    12     ]=     0.69253        Pi(10)[       12     ]=     0.580183        rho[   12     ]=     0.961332
>run
? 13
P10[    13     ]=     0.760001       Pi(10)[       13     ]=     0.69277         rho[   13     ]=     0.970954
>run
? 14
P10[    14     ]=     0.803741       Pi(10)[       14     ]=     0.759669        rho[   14     ]=     0.977129
>run
? 15
P10[    15     ]=     0.833854       Pi(10)[       15     ]=     0.803407        rho[   15     ]=     0.981017
>run
? 25
P10[    25     ]=     0.935818       Pi(10)[       25     ]=     0.931386        rho[   25     ]=     0.993238
>run
? 50
P10[    50     ]=     0.974802       Pi(10)[       50     ]=     0.974057        rho[   50     ]=     0.99756
>run
? 100
P10[    100    ]=     0.988605       Pi(10)[       100    ]=     0.988442        rho[   100    ]=     0.999396
>run
? 1000
P10[    1000   ]=     0.999165       Pi(10)[       1000   ]=     0.99895         rho[   1000   ]=     1.000081
>list
100 dim c(50),a(1100)
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110 input n
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138 gamma = ahat/2.4
139 tt = -0.25*log(rnd(1))
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150 j = 0
160 j = j+1
170 if j = s+1 then k = k+1
180 if j = s+1 then 270
190 if clock < c(j) then 160
200 x = 2.4
205 sx = sx+x
210 c(j) = clock+x
215 a(in) = a(in)+x
220 m = c(1)
230 for i = 2 to s
```

```
240 if c(i) < m then m = c(i)
250 next i
260 if m > clock then ab = ab+m-clock
270 next d
300 print "P10[",n,"]=",ab/clock," Pi(10)[",n,"]=",k/nstop," rho[",n,"]=",sx/clock/s
>139 tt=0.25
>200 x=-2.4 * log(rnd(1))
>run
? 10
P10[   10    ]=    0.370911       Pi(10)[      10    ]=    0       rho[   10    ]=    0.905583
>run
? 11
P10[   11    ]=    0.580821       Pi(10)[      11    ]=    0.37205        rho[   11    ]=    0.943746
>run
? 12
P10[   12    ]=    0.692523       Pi(10)[      12    ]=    0.580609       rho[   12    ]=    0.961363
>run
? 13
P10[   13    ]=    0.759506       Pi(10)[      13    ]=    0.692488       rho[   13    ]=    0.971073
>run
? 14
P10[   14    ]=    0.803576       Pi(10)[      14    ]=    0.759211       rho[   14    ]=    0.977094
>run
? 15
P10[   15    ]=    0.834064       Pi(10)[      15    ]=    0.803064       rho[   15    ]=    0.981077
>run
? 25
P10[   25    ]=    0.934847       Pi(10)[      25    ]=    0.931002       rho[   25    ]=    0.993212
>run
? 50
P10[   50    ]=    0.974897       Pi(10)[      50    ]=    0.974105       rho[   50    ]=    0.997952
>run
? 100
P10[   100    ]=    0.985722       Pi(10)[      100    ]=    0.988501       rho[   100    ]=    0.999576
>run
? 1000

P10[   1000    ]=    0.964474       Pi(10)[      1000    ]=    0.998923       rho[   1000    ]=    1.005526
>>
```