In[1]:=
```
Clear[slump, start, data, xt, tid];
```

In[15]:=
```
data = Table[
   N[Mean[Table[{tid = 0, xt = {slump = Random[UniformDistribution[{0, 1}]], If[slump < 1/2, start = 0],
           If[1/2 ≤ slump < 3/4, start = 1], If[3/4 ≤ slump < 7/8, start = 2],
           If[7/8 ≤ slump < 15/16, start = 3], If[15/16 ≤ slump < 31/32, start = 4],
           If[31/32 ≤ slump < 63/64, start = 5], If[63/64 ≤ slump < 127/128, start = 6],
           If[127/128 ≤ slump < 255/256, start = 7], If[255/256 ≤ slump < 511/512, start = 8],
           If[511/512 ≤ slump < 1023/1024, start = 9], If[1023/1024 ≤ slump, start = 10], start}[[13]],
         While[tid < 10 && xt < 19/2, If[xt < 1/2, tid = tid + Random[ExponentialDistribution[1]];
           xt = 1, tid = tid + Random[ExponentialDistribution[3]]];
          slump = Random[UniformDistribution[{0, 1}]]; If[slump ≤ 1/3, xt = xt + 1, xt = xt - 1]],
         If[xt > 19/2, 1, 0]}[[4]], {i, 1, 10000}]]], {j, 1, 200}];
```

In[17]:=
```
N[Mean[data]]
```

Out[17]=
```
0.0084865
```

In[14]:=
```
Sqrt[0.00826 * (1 - 0.00826) / 20000000]
```

Out[14]=
```
0.0000202383
```

```
0.00826
```

In[16]:=
```
data
```

Out[16]=
```
{0.0073, 0.0074, 0.0085, 0.0084, 0.0086, 0.0071, 0.0084, 0.0082, 0.0073, 0.0063, 0.0094,
 0.0073, 0.008, 0.01, 0.0093, 0.0092, 0.0076, 0.0087, 0.011, 0.0084, 0.0077, 0.0061, 0.0085,
 0.0082, 0.008, 0.0088, 0.0076, 0.0095, 0.0101, 0.0076, 0.0096, 0.0088, 0.0076, 0.0087, 0.0074,
 0.0076, 0.008, 0.0085, 0.0082, 0.0095, 0.007, 0.0072, 0.0067, 0.0083, 0.0103, 0.0097, 0.0099,
 0.0092, 0.0095, 0.0076, 0.0086, 0.009, 0.0069, 0.0077, 0.0074, 0.0091, 0.008, 0.0078, 0.008,
 0.0085, 0.0086, 0.0085, 0.0074, 0.0083, 0.0082, 0.0087, 0.008, 0.0069, 0.0106, 0.0078, 0.0094,
 0.0079, 0.0089, 0.0103, 0.0089, 0.01, 0.0096, 0.0078, 0.009, 0.008, 0.0101, 0.0087, 0.0088,
 0.0082, 0.0103, 0.0087, 0.0081, 0.0088, 0.0082, 0.0078, 0.0072, 0.0095, 0.0078, 0.0091, 0.008,
 0.0085, 0.008, 0.0071, 0.008, 0.0082, 0.0086, 0.0088, 0.0088, 0.0081, 0.0081, 0.0069, 0.0083,
 0.0084, 0.0067, 0.0078, 0.0076, 0.0112, 0.0084, 0.0086, 0.0095, 0.0081, 0.0088, 0.0078,
 0.0092, 0.0074, 0.0095, 0.0092, 0.0096, 0.0094, 0.0074, 0.007, 0.0098, 0.0098, 0.009, 0.008,
 0.0089, 0.0083, 0.0093, 0.0075, 0.0087, 0.0088, 0.0079, 0.0101, 0.0074, 0.0095, 0.009, 0.0095,
 0.0072, 0.009, 0.0094, 0.0078, 0.0084, 0.0088, 0.0096, 0.0089, 0.0086, 0.0095, 0.0096, 0.0096,
 0.0081, 0.0101, 0.0073, 0.0097, 0.008, 0.009, 0.0091, 0.0091, 0.0096, 0.0089, 0.0075, 0.0087,
 0.009, 0.009, 0.0076, 0.0093, 0.009, 0.0078, 0.0104, 0.0079, 0.0067, 0.0093, 0.0096, 0.0096,
 0.0097, 0.0089, 0.0086, 0.0066, 0.0089, 0.0073, 0.0084, 0.0079, 0.0078, 0.0095, 0.0086,
 0.0062, 0.0103, 0.0083, 0.0089, 0.0069, 0.0084, 0.0082, 0.0079, 0.0068, 0.0085, 0.0066}
```