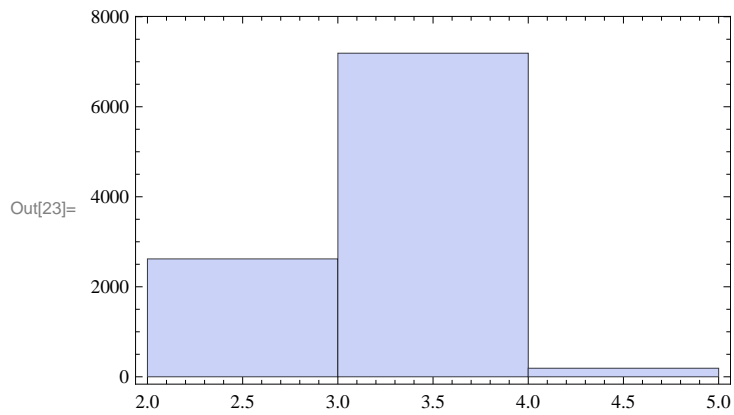


```
In[13]:= << Combinatorica`  
  
In[1]:= kings = 50; cursed = 1; thrones = 2; sittime = 5 / (60 * 24); wizardeffect = 0;  
  
In[2]:= kingstb = Join[ConstantArray[1, cursed], ConstantArray[0, kings - cursed]]  
  
Out[2]= {1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,  
         0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0}  
  
In[3]:= thronestb = ConstantArray[0, thrones]  
  
Out[3]= {0, 0}  
  
In[4]:= gettf[sittime_, listt_] := Append[Most[listt], Last[listt] +  
      If[Most[listt] != {}, sittime Total[Map[UnitStep[Last[listt] - #] &, Most[listt]]], 0];  
gettimes[sittime_, kings_] := Module[{randomarray}, randomarray =  
      Table[RandomReal[{0, 1 - j sittime}], {j, 0, kings - 1}]; gettf[sittime, randomarray];  
  
In[14]:= getkingspos[kings_] := RandomPermutation[Range[kings]];  
  
In[15]:= getthronespos[thrones_, kings_] := RandomChoice[Range[thrones], kings];  
  
In[10]:= updatefunction[list_, {pos_, value_}] := ReplacePart[list, pos → value];  
  
In[11]:= updatefunction2[{kingslist_, throneslist_}, {kingspos_, thronespos_}] :=  
      {updatefunction[kingslist,  
        {kingspos, Unitize[kingslist[[kingspos]] + throneslist[[thronespos]]]}, updatefunction[  
          throneslist, {thronespos, Unitize[kingslist[[kingspos]] + throneslist[[thronespos]]]}];  
  
In[16]:= round2[{{kingstb_, thronestb_, counter_}, sittime_}] := Module[{nkings, nthrones,  
      times, kingspos, kingsval, thronespos, thronesval, timetable, updatelist},  
      nkings = Length[kingstb];  
      nthrones = Length[thronestb];  
      times = gettimes[sittime, nkings];  
      kingspos = getkingspos[nkings];  
      thronespos = getthronespos[nthrones, nkings];  
      timetable = Sort[Transpose[{times, kingspos, thronespos}]]];  
      updatelist = Map[Rest, timetable];  
      {kingsval, thronesval} = Fold[updatefunction2, {kingstb, thronestb}, updatelist];  
      {{kingsval, thronesval, counter + 1}, sittime};  
  
In[17]:= tabela[{{kingstb_, thronestb_}, sittime_}, runs_] :=  
      Table[Last[First[NestWhile[round2, {{kingstb, thronestb, 0}, sittime},  
        (#[[1, 1]] != ConstantArray[1, Length[kingstb]]) &]], {runs});  
  
In[21]:= Timing[results = tabela[{{kingstb, thronestb}, sittime}, 10 000];]  
  
Out[21]= {41.98, Null}
```

```
In[23]:= Histogram[results, {1}, PlotRange -> All, Frame -> True]
```



```
In[24]:= N[Mean[results]]
```

Out[24]= 2.757

```
In[25]:= {Min[results], Max[results]}
```

Out[25]= {2, 4}

```
In[20]:= Timing[test2 = NestWhile[round2, {{kingstb, thronestb, 0}, sittime},
      (#[[1, 1]] ≠ ConstantArray[1, Length[kingstb]]) &]]
```

[illegible]

```
In[26]:= test = NestList[round2, {{kingstb, thronestb, 0}, sittime}, 6]
```

[illegible]