

Untitled3

February 27, 2022

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[4]: def sk(n):  
      sum = 0  
      for i in range(1,n+1): # since range gives half open interval  
          sum = sum + (1/i)  
      return sum
```

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[ ]:
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```
[2]: def parta():  
      k = 1000  
      while sk(k) > 4:  
          k -= 1  
      ans = k + 1 # smallest k is the last one to satisfy the condtion so we add  
      ↪ 1.  
      print(ans)
```

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[7]: parta()
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31

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[3]: def partb():  
      k = 10000  
      while sk(k) > 8:  
          k -= 1  
      ans = k + 1 # smallest k is the last one to satisfy the condtion so we add  
      ↪ 1.  
      print(ans)
```

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[8]: partb()
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1674

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[5]: def partc():  
      k = 100000  
      while sk(k) > 12:  
          k -= 1  
      ans = k + 1 # smallest k is the last one to satisfy the condtion so we add  
      ↪ 1.  
      print(ans)
```

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[9]: partc()
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91380

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[6]: def partd():  
      k = 5000000  
      while sk(k) > 16:  
          k -= 1  
      ans = k + 1 # smallest k is the last one to satisfy the condtion so we add  
      ↪ 1.  
      print(ans)
```

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[10]: partd()
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4989191

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[ ]:
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