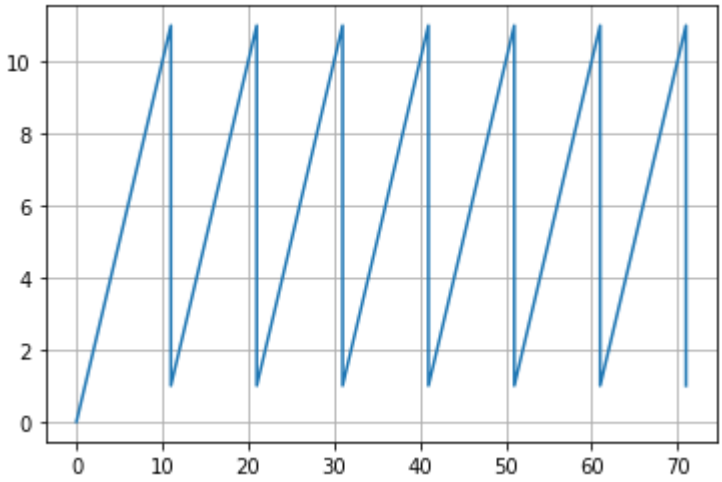
In [19]:

```
from random import expovariate
from math import inf as infint
from matplotlib import pyplot
A1=[]
A2=[]
AOI=[]
AOImax=[]
AOImin=[]
L=[]
B=[]
At=[]
As=[]
TR=[0]
g=[0,10,20,30,40,50,60,70]
r=[2,11,21,31,41,51,61,71]
for i in range (len(r)):
    AOI.append(r[i]-g[i-1])
    AOI.append(r[i]-g[i])



for i in range (len(r)):
    TR.append(r[i])
    TR.append(r[i])

AOI[0]=0
AOI.insert(1,r[0])

for i in  range(len(AOI)-1):
    if (i % 2) == 0:
           AOImin.append(AOI[i])
    else:
            AOImax.append(AOI[i])

for i in  range(len(AOImax)):
    L.append(AOImax[i]-AOImin[i])

r.insert(0,0)
for i in  range(len(r)-1):
    B.append(r[i+1]-r[i])

for i in  range(len(B)):
    A1.append(B[i]*L[i])
    At = sum(A1)/2
    A2.append(B[i]*AOImin[i])
    As = sum(A2)
    Average_AOI=round((As+At)/r[-1],2)

print("Average AoI=",Average_AOI)
print("AoImax =",AOImax)
print("AoImin =",AOImin)


print("At =",At)
print("As =",As)
print(TR)

print(AOI)
print(L)
```

```
print(B)

pyplot.plot(TR,AOI)
pyplot.grid()
```

```
Average AoI= 5.92
AoImax = [2, 11, 11, 11, 11, 11, 11, 11]
AoImin = [0, 2, 1, 1, 1, 1, 1, 1]
At = 342.5
As = 78
[0, 2, 2, 11, 11, 21, 21, 31, 31, 41, 41, 51, 51, 61, 61, 71, 71]
[0, 2, 2, 11, 1, 11, 1, 11, 1, 11, 1, 11, 1, 11, 1, 11, 1]
[2, 9, 10, 10, 10, 10, 10, 10]
[2, 9, 10, 10, 10, 10, 10, 10]
```



In [ ]: