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16. mars 2022

1. 3.4.4

skrifaði smá python kóða til að bruteforcea þetta dæmi, prófar fyrstu milljón a fyrir hvert og eitt M, prentar a og M þegar stökin eru 10 mismunandi

```python
tolur = [83,69,65,82,67,72,88,77,80,76]

outTolur = []
M = 9
while (True):
    M+=1
    print(M)
    for a in range(1,1000000):
        for k in tolur:
            outTolur.append((a*k)%M)
        if(len(set(outTolur))==10): break
        outTolur = []
    if(len(set(outTolur))==10): break

print('outSet',set(outTolur))
print('outTolur',outTolur)
print('a',a)
print('M',M)
```

a = 1 og M = 20 þá er output $[3, 9, 5, 2, 7, 12, 8, 17, 0, 16]$

2.

Allar aðgerðir framkvæmdar 10 sinnum

BST

case	insertion time (s)	search time (s)
worst	0.211	0.324
best	0.185	0.218
avg.	0.197	0.274

RedBlackBST

case	insertion time (s)	search time (s)
worst	0.230	0.356
best	0.203	0.221
avg.	0.217	0.254

SCHST

case	insertion time (s)	search time (s)
worst	0.197	0.243
best	0.170	0.219
avg.	0.181	0.227

LPHST

case	insertion time (s)	search time (s)
worst	0.201	0.273
best	0.147	0.219
avg.	0.160	0.236

3. 3.4.31