(c)
```
# s starts as an empty stack, k is a positive integer.
# Calculate the number of steps in terms of k.
# Hint: 1 + 2 + 3 + ... + k = k * (k + 1) / 2
for i in range(k)
    s.push(i)
```

Stack1

$k \times (1) = k$ steps

Stack2

1st 2nd 3rd k^{th}

0 1 2 $\cdots$ (k-1)

1 + 2 + 3 + k

$$\sum_{i=1}^{k} i = \frac{k(k+1)}{2} \text{ steps}$$

$$= \frac{k^2 + k}{2}$$