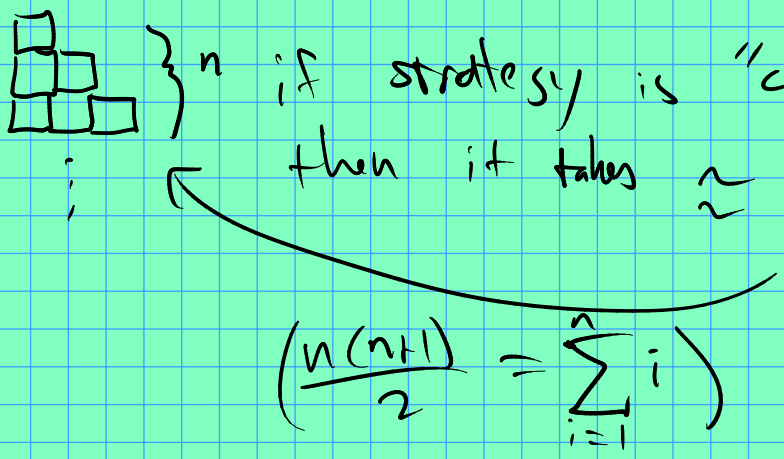
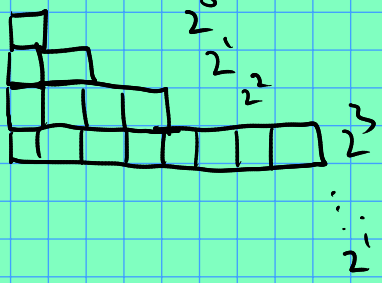
What is the cost of n consecutive push_back(·) calls?



if strategy is "capacity ++" then it takes $\simeq n^2$ steps.

$\left(\frac{n(n+1)}{2} = \sum_{i=1}^{n} i\right)$

What about the "capacity *=2" strategy?



How many times did we have to resize in terms of n?

$\log_2 n$

Now, what is $\sum_{i=1}^{\log n} 2^i$?

(Recall, $\sum_{i=0}^{k} r^i = \frac{1+r^{k+1}}{1-r}$)

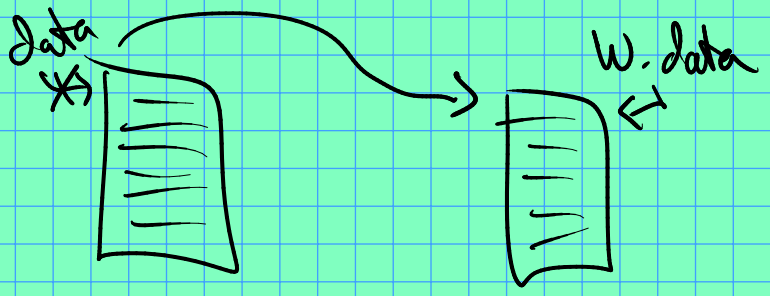
So $\sum_{i=1}^{\log n} 2^i = \frac{1-2^{\log n+1}}{-1} - 1$

$= 2^{\log n+1} - 2 \simeq 2(n-1)$

Not that different than if we magically knew the size from the beginning!

Assignment operator: the default does

```
this -> data = W.data;
```



creates a memory leak, & a double free or seg fault...