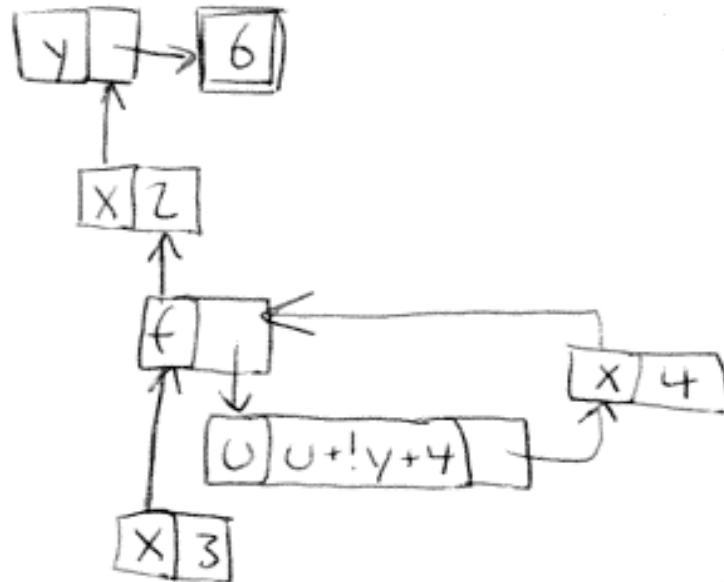


Q3.2: If the function f is recursive, $res = f\ x$ will ignore the memoization already in place whenever a new key/value pair needs to be added.

Q3.4: If the function prints something out, it will do so whenever a key/value pair is added to the dictionary instead of when it is accessed.

Q4



$f(9)$

final answer:
19

as ~~26~~ as $u=9$
 $!y=6$
 $+x=4$

 19