

⑤ Mid Module Test Discussion : (Next Sat, 8th Oct)

① Breaks in October

- i) 4th & 5th Oct (No class on Wed, 5th Oct)
- ii) Diwali Break 22nd Oct - 26th Oct (no classes)

② Transition Test (after every month)

10th - 20th of each month  $\left\{ \begin{array}{l} 10th - 15th Oct \\ \underline{Oct} \end{array} \right\}$

7 days  $\rightarrow$  2 hrs

Content: All the Intermediate (move focus after mid-module test)





Content:

{Problem Solving Session (next Tri)}

⇒ From { Hashing, OOPS, Greedy } FP, File handling, Calculus, Exception Handling, Modules

Passing Criteria. (Or) 60-70%

Attendance (Live + Recorded) > 70% and PSP > 70%

Pass  
Continue

Test  
Fail  
Extra time to prepare



# Functional Programming

map

Today

- Lambda fn ✓
- Examples ✓
- Functions  $\Rightarrow$  High Order Functions ✓
- Decorators ✓

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Next  $\rightarrow$  Principles of FP

- map
  - reduce
  - Filter
  - Adhoc
-



Math fn

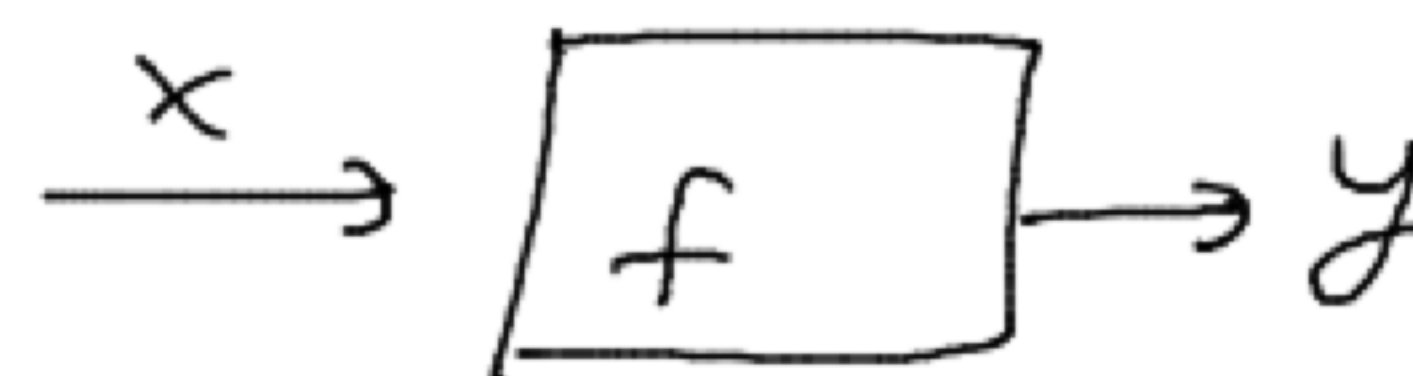
$$f(x) = y$$

$$\text{sq}r(\textcircled{4}) = 16$$

$$\text{sq}r(x_1) = \text{sq}r(x_2) = 16$$

$$\boxed{x_1 = x_2}$$

$$x_1? \ x_2? \Rightarrow \textcircled{4}$$



$$\underline{\underline{x \geq 0}}$$

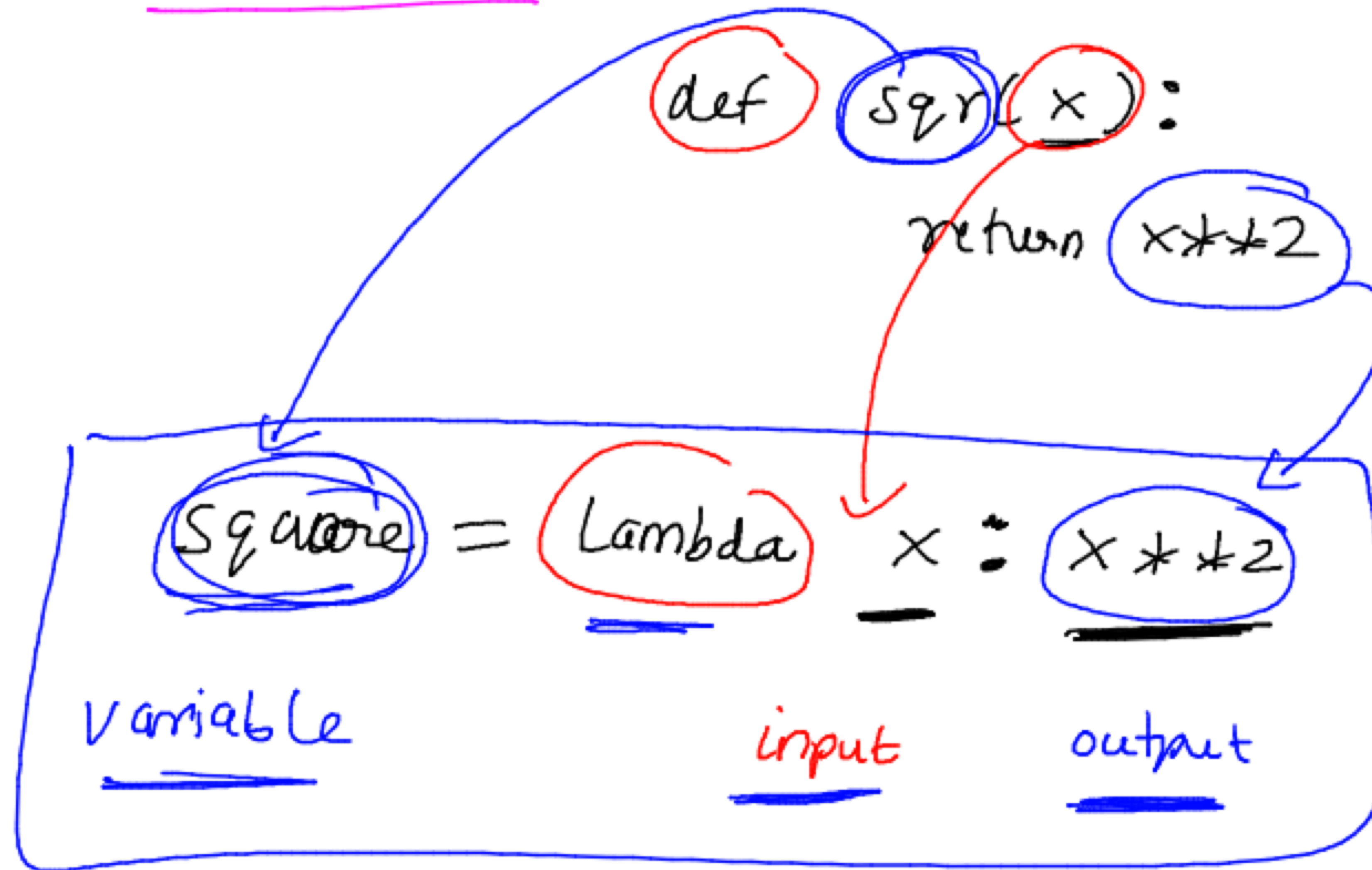
$$f(\textcircled{x}) = a, \ f(\textcircled{x}) = b$$

$$\Rightarrow \boxed{a = b}$$

Same input  $\Rightarrow$  Same output

# Lambda Calculus

## Lambda fn



def  $\Rightarrow$  keyword

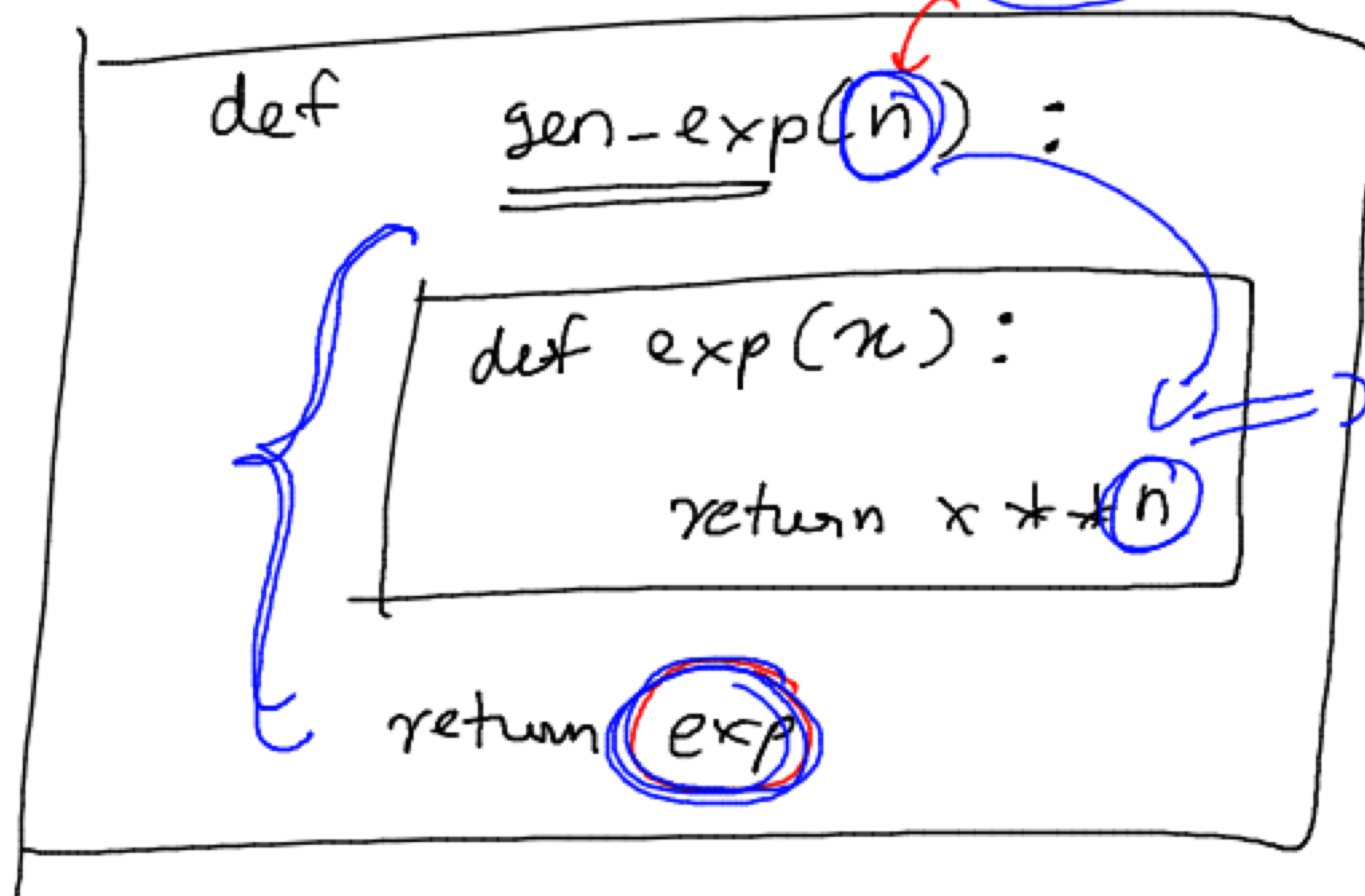
$x = 3$   
 $\curvearrowright$

lambda  $\Rightarrow$  keyword



## Higher Order Functions

$n=5 \Rightarrow$  parameter.



`def exp(x):`  
`return x * 5`

$\text{exp}_5 = \text{gen\_exp}(5)$  ✓ argument

Var that is storing a fn.