Practice Session

lambda x : if x is max → -1

a = [10, 7, 5, 6, 3, 4, 1]

→ max(a) = 10

["abc", "def"]

f(x) = list(x)

[["a", "b", "c"], ["d", "e", "f"]]

Q → How many 4 letter words can we form from letters of the word

MISSISSIPPI → (11)

M →	1
P →	2
S →	4
+ →	4

4 options Cases → (Addition)

1. 4 letters same
2. 3 letters same, 1 diff
3. 2 letters same,

2 letters same.

(4) 2 letters same, 2 diff

(5) All 4 letters are diff.

(1) either S is picked or I is picked.

= 2

rearrangements = 1

T = 2 * 1

= 2

(2) 3 letters same = 2

4th diff letter = $^3C_1 = 3$

6

rearrangements = $\frac{4!}{3!} = 4$

T = 4 × 3 × 2

= 24

(3) 2 same = $^3C_2$

SSII
SSPP
IIPP

rearrangements = $\frac{4!}{2!\,2!}$

T = 3 × 6

= 18

(4) 2 same = $^3C_1 = 3$

2 diff = $^3C_2 = 3$

SSIP
SSPM
PPIM

rearrangements = $\frac{4!}{2!}$

T = 9 × 12

= 108

(5) 4 different characters.

= $^4C_4$

= 1

rearrangements = 4!

$T = 24$

Final $= 2 + 24 + 18 + 108 + 24$

$= 176$