

a)

```
0 def ins(e, ls):
1     yield [e, *ls]
2     if ls:
3         for i in ins(e, ls[1:]):
4             yield [ls[0], *i]
5 for i in ins(0, [1, 2, 3]):
6     print i
```

imprime:

global	
pc	5
i	-

---

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imprime:

global	
pc	5
i	-

ins	
pc	1
e	0
ls	[1, 2, 3]

---

```

0 def ins(e, ls):
1     yield [e, *ls]
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6     print i

```

imprime: [0, 1, 2, 3]

global	
pc	6
i	[0, 1, 2, 3]

ins	
pc	1
e	0
ls	[1, 2, 3]

```

0 def ins(e, ls):
1     yield [e, *ls]
2     if ls:
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imprime: [0, 1, 2, 3]

```

global	
pc	5
i	-

ins	
pc	3
e	0
ls	[1, 2, 3]
i	-

---

```
0 def ins(e, ls):
1     yield [e, *ls]
2     if ls:
3         for i in ins(e, ls[1:]):
4             yield [ls[0], *i]
5 for i in ins(0, [1, 2, 3]):
6     print i
imprime: [0, 1, 2, 3]
```

global	
pc	5
i	-

ins	
pc	3
e	0
ls	[1, 2, 3]
i	-

ins	
pc	1
e	0
ls	[2, 3]

---

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0 def ins(e, ls):
1     yield [e, *ls]
2     if ls:
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4             yield [ls[0], *i]
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6     print i
imprime: [0, 1, 2, 3]

```

global	
pc	5
i	-

ins	
pc	4
e	0
ls	[1, 2, 3]
i	[0,2,3]

ins	
pc	1
e	0
ls	[2, 3]

---

```
0 def ins(e, ls):
1     yield [e, *ls]
2     if ls:
3         for i in ins(e, ls[1:]):
4             yield [ls[0], *i]
5 for i in ins(0, [1, 2, 3]):
6     print i
imprime: [0, 1, 2, 3] [1,0,2,3]
```

global	
pc	6
i	[1,0,2,3]

ins	
pc	4
e	0
ls	[1, 2, 3]
i	[0,2,3]

ins	
pc	1
e	0
ls	[2, 3]

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imprime: [0, 1, 2, 3] [1,0,2,3]

```

global	
pc	5
i	-

ins	
pc	3
e	0
ls	[1, 2, 3]
i	-

ins	
pc	3
e	0
ls	[2, 3]
i	-

---

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6     print i
imprime: [0, 1, 2, 3] [1,0,2,3]

```

global	
pc	5
i	-

ins	
pc	3
e	0
ls	[1, 2, 3]
i	-

ins	
pc	3
e	0
ls	[2, 3]
i	-

ins	
pc	1
e	0
ls	[3]

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6     print i
imprime: [0, 1, 2, 3] [1,0,2,3]

```

global	
pc	5
i	-

ins	
pc	3
e	0
ls	[1, 2, 3]
i	-

ins	
pc	4
e	0
ls	[2, 3]
i	[0,3]

ins	
pc	1
e	0
ls	[3]

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5 for i in ins(0, [1, 2, 3]):
6     print i
imprime: [0, 1, 2, 3] [1,0,2,3]

```

global	
pc	5
i	-

ins	
pc	4
e	0
ls	[1, 2, 3]
i	[2,0,3]

ins	
pc	4
e	0
ls	[2, 3]
i	[0,3]

ins	
pc	1
e	0
ls	[3]

---

```

0 def ins(e, ls):
1     yield [e, *ls]
2     if ls:
3         for i in ins(e, ls[1:]):
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5 for i in ins(0, [1, 2, 3]):
6     print i
imprime: [0, 1, 2, 3] [1,0,2,3] [1,2,0,3]

```

global	
pc	6
i	[1,2,0,3]

ins	
pc	4
e	0
ls	[1, 2, 3]
i	[2,0,3]

ins	
pc	4
e	0
ls	[2, 3]
i	[0,3]

ins	
pc	1
e	0
ls	[3]

---

```

0 def ins(e, ls):
1     yield [e, *ls]
2     if ls:
3         for i in ins(e, ls[1:]):
4             yield [ls[0], *i]
5 for i in ins(0, [1, 2, 3]):
6     print i
imprime: [0, 1, 2, 3] [1,0,2,3] [1,2,,0,3]

```

global	
pc	5
i	-

ins	
pc	3
e	0
ls	[1, 2, 3]
i	-

ins	
pc	3
e	0
ls	[2, 3]
i	-

ins	
pc	3
e	0
ls	[3]
i	-

ins	
pc	1
e	0
ls	[]

```

0 def ins(e, ls):
1     yield [e, *ls]
2     if ls:
3         for i in ins(e, ls[1:]):
4             yield [ls[0], *i]
5 for i in ins(0, [1, 2, 3]):
6     print i
imprime: [0, 1, 2, 3] [1,0,2,3] [1,2,0,3] [1,2,3,0]

```

global	
pc	5
i	[1, 2, 3, 0]

ins	
pc	4
e	0
ls	[1, 2, 3]
i	[2, 3, 0]

ins	
pc	4
e	0
ls	[2, 3]
i	[3, 0]

ins	
pc	4
e	0
ls	[3]
i	[0]

ins	
pc	1
e	0
ls	[]