Exercise 6.1

- Consider the grammar

  $S \rightarrow (L) \mid a$

  $L \rightarrow L, S \mid S$

- We have the following operator-precedence relations for the grammar.
  - Show the detailed process of the parsing of the sentence `(a, (a, a))`, follow the style in the previous slides.

	a	(	)	,	$
a			≻	≻	≻
(	≺	≺	≡	≺	
)			≻	≻	≻
,	≺	≺	≻	≻	
$	≺	≺			

Step	Stack	Input	Action	Output
1	$	(a,(a,a))$	shift	
2	$(	a,(a,a))$	shift	
3	$(a	,(a,a))$	reduce	S—>a
4	$(S	,(a,a))$	shift	
5	$(S,	(a,a))$	shift	
6	$(S,(	a,a))$	shift	
7	$(S,(a	,a))$	reduce	S—>a
8	$(S,(S	,a))$	shift	
9	$(S,(S,	a))$	shift	
10	$(S,(S,a	))$	reduce	S—>a

11	$(S,(S,S	))$	reduce	L—>S,S
12	$(S,(L	))$	shift	
13	$(S,(L)	)$	reduce	S—>(L)
14	$(S,S	)$	reduce	L—>S,S
15	$(L	)$	shift	
16	$(L)	$	reduce	S—>(L)
17	$S	$	accept	