

1.

Step	Parse Stack	Look Ahead	Unscanned	Parser Action
0	empty	id	+ id + id \$	Shift
1	id	+	id + id \$	Reduce 'id' to 'S'
2	S	+	id + id \$	Shift
3	S +	id	+ id \$	Shift
4	S + id	+	id \$	Reduce 'id' to 'S'
5	S + S	+	Id \$	Reduce 'S + S' to 'S'
6	S	+	Id \$	Shift
7	S +	id	\$	Shift
8	S + id	\$		Reduce 'id' to 'S'
9	S + S	\$		Reduce 'S + S' to 'S'
10	S	\$		ACCEPT

2.

 $E \Rightarrow b X$  $X \Rightarrow + a X \mid \varepsilon$ 

3.

 $S \Rightarrow a X$  $X \Rightarrow a \mid b \mid \varepsilon$ 

4.

Stack	Input	Action
A \$	t u w v x t w \$	pop(); push(t B' D);
t B' D \$	t u w v x t w \$	pop(); next++;
B' D \$	u w v x t w \$	pop(); push(u w B);
u w B D \$	u w v x t w \$	pop(); next++;
w B D \$	w v x t w \$	pop(); next++;
B D \$	v x t w \$	pop();
D \$	v x t w \$	pop(); push(v D');
v D' \$	v x t w \$	pop(); next++;
D' \$	x t w \$	pop(); push(x B D');
x B D' \$	x t w \$	pop(); next++;
B D' \$	t w \$	pop(); push(t B');
t B' D' \$	t w \$	pop(); next++;
B' D' \$	w \$	pop(); push(w B);
w B D' \$	w \$	pop(); next++;
B D' \$	\$	pop();
D' \$	\$	pop();
\$	\$	ACCEPTS

5.

Step	Parse Stack	Look Ahead	Unscanned	Parser Action
0	empty	id	+ id * id \$	Shift
1	id	+	id * id \$	Reduce 'id' to 'F'
2	F	+	id * id \$	Reduce 'F' to 'T'
3	T	+	id * id \$	Reduce 'T' to 'E'
4	E	+	id * id \$	Shift
5	E +	id	* id \$	Shift
6	E + id	*	id \$	Reduce 'id' to 'F'
7	E + F	*	id \$	Reduce 'F' to 'T'
8	E + T	*	id \$	Shift
9	E + T *	id	\$	Shift
10	E + T * id	\$		Reduce 'id' to 'F'
11	E + T * F	\$		Reduce 'T * F' to 'T'
12	E + T	\$		Reduce 'E + T' to 'E'
13	E	\$		ACCEPT