

$$P ::= D^* S^* \quad \{\} \quad (1)$$

$$D ::= a \{\} \quad \{\} \quad (2)$$

$$| m(f_1, \dots, f_k) \quad \{\} \quad (3)$$

$$| cs(f_1, \dots, f_k)) \quad \{\} \quad (4)$$

$$| f(f_1, \dots, f_k) \quad \{\} \quad (5)$$

$$S ::= x = new\ c([a_1, \dots, a_k]); \quad \{(a_1, f_1) \in E, \dots, (a_k, f_k) \in E, (cs.this, x) \in E\} \quad (6)$$

$$| x = y; \quad \{(x, y) \in E\} \quad (7)$$

$$| [x =] y.m([a_1, \dots, a_k]); \quad \{(y, m.this) \in E, (a_1, f_1) \in E, \dots, (a_k, f_k) \in E, (m.return, x) \in E\} \quad (8)$$

$$| [x =] f([a_1, \dots, a_k]); \quad \{(a_1, f_1) \in E, \dots, (a_k, f_k) \in (E, m.return, x) \in E\} \quad (9)$$