R1. <Rat18F> ::= <Opt Function Definitions> $$ <Opt Declaration List> <Statement List> $$

R2. <Opt Function Definitions> ::= <Function Definitions> | <Empty>

R3. <Function Definitions> ::= <Function> | <Function> <Function Definitions>

R4. <Function Def> ‘ ::= <Function Definition> | epilson

R5. <Function> ::= function <Identifier> ( <Opt Parameter List>) <Opt Declaration List> <Body>

R6. <Opt Parameter List> ::= <Parameter List> | <Empty>

R7. <Parameter List> ::= <Parameter> <Parameter List>’

R8. <Parameter List>’ ::= , <Parameter List>’ | epsilon

R9. <Parameter> ::= <IDs > : <Qualifier>

R10. <Qualifier> ::= int | boolean | real

R11. <Body> ::= { < Statement List> }

R12. <Opt Declaration List> ::= <Declaration List> | <Empty>

R13. <Declaration List> := <Declaration> ; <Declaration List>’

R14. <Declaration List>’ = <Declaration List> | epsilon

R15. <Declaration> ::= <Qualifier > <IDs>

R16. <IDs> ::= <Identifier> <IDs>

R17. <IDs> ::= , <IDs> | epsilon

R18. <Statement List> ::= <Statement> <Statement List>’

R19. <Statement List> ::= <Statement List> | epilson

R20. <Statement> ::= <Compound> | <Assign> | <If> | <Return> | <Print> | <Scan> | <While>

R21. <Compound> ::= { <Statement List> }

R22. <Assign> ::= <Identifier> = <Expression> ;

R23. <If> ::= if ( <Condition> ) <Statement> <If>’

R24. <If>’ ::= ifend | else <Statement> ifend

R25. <Return> ::= return <Return>’

R26. <Return>’ ::= ; | <Expression> ;

R27. <Print> ::= put ( <Expression>);

R28. <Scan> ::= get ( <IDs> );

R29. <While> ::= while ( <Condition> ) <Statement> whileend

R30. <Condition> ::= <Expression> <Relop> <Expression>

R31. <Relop> ::= == | ^= | > |< | => |=<

R32. <Expression> ::= <Term> <Expression>’

R33. <Expression>’ ::= +<Term> <Expression>’ | -<Term> <Expression>’ | epsilon

R34. <Term> ::= <Factor> <Term>’

R35. <Term>’ ::= \* <Factor> <Term>’ | / <Factor> <Term>’ | epsilon

R36. <Factor> ::= - <Primary> | <Primary>

R37. <Primary> ::= <Identifier> | <Integer> | <Identifier> ( <IDs> ) | ( <Expression> ) | <Real> | true | false

R38. <Empty> ::= epsilon