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Problem 1

$\langle \text{expr} \rangle \Rightarrow \langle \text{expr} \rangle + \langle \text{expr} \rangle$
 $\Rightarrow \langle \text{expr} \rangle + \langle \text{expr} \rangle * \langle \text{expr} \rangle$
 $\Rightarrow \langle \text{expr} \rangle + \langle \text{expr} \rangle * \langle \text{int} \rangle$
 $\Rightarrow \langle \text{expr} \rangle + \langle \text{expr} \rangle * \neg \langle \text{nat} \rangle$
 $\Rightarrow \langle \text{expr} \rangle + \langle \text{expr} \rangle * \neg \langle \text{digit} \rangle \langle \text{nat} \rangle$
 $\Rightarrow \langle \text{expr} \rangle + \langle \text{expr} \rangle * \neg \langle \text{digit} \rangle \langle \text{digit} \rangle$
 $\Rightarrow \langle \text{expr} \rangle + \langle \text{expr} \rangle * \neg \langle \text{digit} \rangle 7$
 $\Rightarrow \langle \text{expr} \rangle + \langle \text{expr} \rangle * \neg 07$
 $\Rightarrow \langle \text{expr} \rangle + \langle \text{int} \rangle * \neg 07$
 $\Rightarrow \langle \text{expr} \rangle + \langle \text{nat} \rangle * \neg 07$
 $\Rightarrow \langle \text{expr} \rangle + \langle \text{digit} \rangle * \neg 07$
 $\Rightarrow \langle \text{expr} \rangle + 2 * \neg 07$
 $\Rightarrow \langle \text{int} \rangle + 2 * \neg 07$
 $\Rightarrow \langle \text{nat} \rangle + 2 * \neg 07$
 $\Rightarrow \langle \text{digit} \rangle \langle \text{nat} \rangle + 2 * \neg 07$
 $\Rightarrow \langle \text{digit} \rangle \langle \text{digit} \rangle + 2 * \neg 07$
 $\Rightarrow \langle \text{digit} \rangle 2 + 2 * \neg 07$
 $\Rightarrow 12 + 2 * \neg 07$

Problem 2

<stmt> => for <id> = <expr> to <expr> do <stmt>
=> for <letter> = <expr> to <expr> do <stmt>
=> for x = <expr> to <expr> do <stmt>
=> for x = <int> to <expr> do <stmt>
=> for x = -<nat> to <expr> do <stmt>
=> for x = -<digit><nat> to <expr> do <stmt>
=> for x = -1<nat> to <expr> do <stmt>
=> for x = -1<digit> to <expr> do <stmt>
=> for x = -12 to <expr> do <stmt>
=> for x = -12 to <int> do <stmt>
=> for x = -12 to <nat> do <stmt>
=> for x = -12 to <digit><nat> do <stmt>
=> for x = -12 to 1<nat> do <stmt>
=> for x = -12 to 1<digit> do <stmt>
=> for x = -12 to 10 do <stmt>
=> for x = -12 to 10 do { <stmts> }
=> for x = -12 to 10 do { <stmt>; <stmts> }
=> for x = -12 to 10 do { <id> = <expr>; <stmts> }
=> for x = -12 to 10 do { <letter> = <expr>; <stmts> }
=> for x = -12 to 10 do { y = <expr>; <stmts> }
=> for x = -12 to 10 do { y = <int>; <stmts> }
=> for x = -12 to 10 do { y = <nat>; <stmts> }
=> for x = -12 to 10 do { y = <digit>; <stmts> }
=> for x = -12 to 10 do { y = 0; <stmts> }
=> for x = -12 to 10 do { y = 0; <stmt> }
=> for x = -12 to 10 do { y = 0; pass }