

7.1d

$$\begin{aligned}t_1 &:= a + b \\t_2 &:= -t_1 \\t_3 &:= c + d \\t_4 &:= t_2 * t_3 \\t_5 &:= t_1 + c \\t_7 &:= t_4 + t_5\end{aligned}$$

7.2c

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1  L0: if i <= 10 goto L1
2      goto L2
3  L1: a[i] := 0
4  L2:
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7.5

$$\begin{aligned}P &\rightarrow \{D.offset_1 = 0;\} D \{P.offset = D.offset_2\} \\D &\rightarrow \{D_1.offset_1 = D.offset_1;\} D_1; \{D_2.offset_1 = D_1.offset_2;\} D_2 \{D.offset_2 = D_2.offset_2;\} \\D &\rightarrow id : T \{enter(id.lexeme, T.type, D.offset_1); D.offset_2 = D.offset_1 + T.width;\} \\T &\rightarrow integer \{T.type = integer; T.width = 4;\} \\T &\rightarrow real \{T.type = real; T.width = 8;\} \\T &\rightarrow array[num] \text{ of } T_1 \{T.type = array(num.val, T_1.type); T.width = num.val \times T_1.width\} \\T &\rightarrow \uparrow T_1 \{T.type = pointer(T_1.type); T.width = 4;\}\end{aligned}$$