

**Concepts of Programming Languages, CSCI 305, Fall 2021**  
**Attribute Grammars, Section 4.3, pages 187-194, Nov. 15**

$\langle \text{binary numeral} \rangle \rightarrow \langle \text{binary digits} \rangle . \langle \text{fraction digits} \rangle$

$\langle \text{binary digits} \rangle \rightarrow \langle \text{binary digits} \rangle \langle \text{bit} \rangle$

$\langle \text{binary digits} \rangle \rightarrow \langle \text{bit} \rangle$

$\langle \text{fraction digits} \rangle \rightarrow \langle \text{fraction digits} \rangle \langle \text{bit} \rangle$

$\langle \text{fraction digits} \rangle \rightarrow \langle \text{bit} \rangle$

$\langle \text{bit} \rangle \rightarrow 0$

$\langle \text{bit} \rangle \rightarrow 1$