

MATH 150 FALL 2012

LIST OF LANGUAGES

1. Language of Arithmetic. $\mathcal{L} = \{\dot{0}, \dot{S}, \dot{+}, \dot{\times}, \dot{<}\}$.
 - Constant symbols: $\dot{0}$.
 - Function symbols:
 - Unary function symbols: $\dot{S}$.
 - Binary functions symbols: $\dot{+}$, $\dot{\times}$.
 - Relational symbols: Binary relational symbol $\dot{<}$.
2. Language of Group Theory, also briefly “language of groups”.
 $\mathcal{L} = \{\circ, e\}$.
 - Constant symbols: e .
 - Function symbols: Binary function symbol $\circ$.
3. Language of Ring Theory, also briefly “language of rings”.
 $\mathcal{L} = \{\dot{+}, \dot{-}, \dot{\times}, \dot{0}, \dot{1}\}$.
 - Constant symbols: $\dot{0}$, $\dot{1}$.
 - Function symbols: Binary function symbols $\dot{+}$, $\dot{-}$, and $\dot{\times}$.
4. Language of Graphs. $\mathcal{L} = \{\dot{E}\}$ where $\dot{E}$ is a binary relational symbol.