Fill in the Action and Goto tables for an LALR parser for the grammar given below, where the start symbol is **E**. "$\wedge$" is the power operator, *i.e.,* $x \wedge y$ means x^y. Although the grammar is ambiguous, your parser must not be ambiguous: an ambiguous string must be parsed according to the precedence of operators defined for Python. The power operator is right-associative and binds more tightly than unary operators on its left and less tightly than unary operators on its right. Thus $a \wedge a \wedge a$ means $a \wedge (a \wedge a)$, $-a \wedge a$ means $-(a \wedge a)$, and $a \wedge -a$ means $a \wedge (-a)$. Note: a represents any variable name.

1. $\mathbf{E} \longrightarrow \mathbf{E} \quad + \quad \mathbf{E}$
2. $\mathbf{E} \longrightarrow \mathbf{E} \quad - \quad \mathbf{E}$
3. $\mathbf{E} \longrightarrow \mathbf{E} \quad * \quad \mathbf{E}$
4. $\mathbf{E} \longrightarrow - \quad \mathbf{E}$
5. $\mathbf{E} \longrightarrow \mathbf{E} \quad \wedge \quad \mathbf{E}$
6. $\mathbf{E} \longrightarrow (\quad \mathbf{E} \quad)$
7. $\mathbf{E} \longrightarrow \mathbf{id}$
