18.702 Quiz 5

Take this quiz any time on Friday, April 23.

As always: You are required to do the quiz alone.
You may consult the text, but no other source.

The problem:
Let M be the integer lattice in $\mathbb{R}^2$, and let L be the lattice with lattice basis $((2,3),(3,6))$.
Determine the index $[M : L]$ of L in M.