Force on table wire

Because $\vec{F} = i\vec{L} \times \vec{B}$, where $\vec{L}$ is horizontal, the horizontal component of $\vec{B}$, parallel to $\vec{L}$, does not contribute to the force. The magnitude is $F = iLB_v = 0.474$ mN, and the direction (through right-hand rule) is horizontal, toward magnetic west (i.e. toward 7.60° south of west).

Grading: 2 points for correct equation; 4 points for correct magnitude; 4 points for correct direction.