

Mathematics 1110H – Calculus I: Limits, Derivatives, and Integrals

TRENT UNIVERSITY, Fall 2018

Assignment #7

Time to Hike

or,

A Change of Pace

Due on Friday, 9 November.

Meredith Mathie goes on a hike in the mountains, setting out from the Origin Lodge at 9 a.m. and taking a trail that winds over hill and dale through Maple Forest to Maximum Peak. On reaching the summit of Maximum Peak, Meredith immediately turns around and, following exactly the same trail in reverse, returns to Origin Lodge at 5 p.m. Meredith is a tad obsessive-compulsive and always walks at a speed of 4.5 km/h going uphill, 6 km/h on level ground, and 9 km/h going downhill. At no point between departing from and returning to Origin Lodge does Meredith take a break or pause.

1. What is the round-trip distance walked by Meredith? [5]
2. Determine, as accurately as you can, at what time Meredith reached the summit of Maximum Peak. [5]

NOTE. By all means work together and look things up for this assignment, but do not ask about it in office hours or seminars*.

* Ask not for whom the puzzle bell tolls, for it tolls for thee!