

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

TRENT UNIVERSITY, Summer 2023 (S61)

Quiz #6

Meredith Meanders

Due just before midnight on Thursday, 25 May.*

Meredith decides to cycle from home at Point A to a scenic location at Point B and back by exactly the same route. The route in question has a mix of level ground and some gentle hills. On level ground Meredith cycles at 40 km/hr , going uphill at 30 km/hr , and going downhill at 60 km/hr . It takes Meredith 6 hours to make the return trip, not counting the time spent at Point B.

Please give your complete reasoning when answering the two questions below.

1. As best as you can determine based on the information provided, what is the distance between Point A and Point B along the route Meredith took? *[3]*
2. As best as you can determine based on the information provided, how long after setting out from Point A did it take Meredith to reach Point B? *[2]*

* You should submit your solutions via Blackboard's Assignments module, preferably as a single pdf. If this fails, you may submit your work to the instructor on paper or by email to sbilaniuk@trentu.ca.