Problem 1.70

A sailor in a small sailboat encounters shifting winds. She sails 2.00 km east, then 3.50 km southeast, and then an additional distance in an unknown direction. Her final position is 5.80 km directly east of the starting point.

Part A
Find the magnitude of the third leg of the journey.

ANSWER: \( \text{Answer not displayed} \ \text{km} \)

Part B
Find the direction of the third leg of the journey.

ANSWER: \( \text{Answer not displayed} \ \text{° east of north} \)