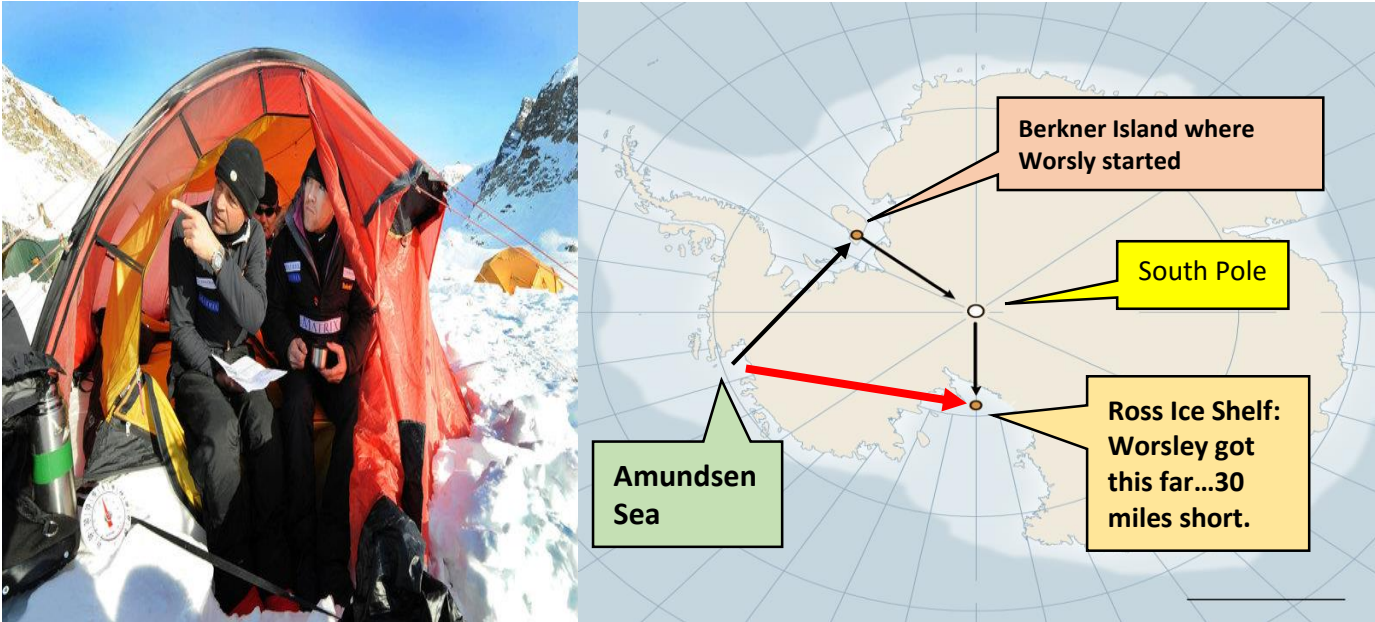


RESULTANT VECTORS

Unit 2 Dr. John P. Cise, Professor of Physics,
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Henry Worsley, a British Adventurer Trying to Cross Antarctica, Dies at 55



Henry Worsley in 2008 during a training run in Greenland.

The [message](#), transmitted on Friday via satellite telephone from freezing isolation in Antarctica, sounded resigned, melancholy and indisputably weary, as the speaker recalled the end of a previous explorer's attempt to traverse the most inhospitable terrain on earth and now found himself in his predecessor's snow boots.

"When my hero, Ernest Shackleton, stood 97 miles from the South Pole on the morning of Jan. 9, 1909, he said he'd shot his bolt," the British adventurer Henry Worsley said in the message. "Well, today, I have to inform you with some sadness that I, too, have shot my bolt." "My journey is at an end," Mr. Worsley said. "I have run out of time, physical endurance and a simple sheer inability to slide one ski in front of the other to travel the distance required to reach my goal." Mr. Worsley's disappointment was acute and his sense of failure more intense because of how close **((he had**

come to success. Attempting to be the first person to cross Antarctica on foot, unassisted and unsupported, he crossed more than 900 miles and was forced, by exhaustion and ill health, to call for help 30 miles from his journey's intended end.)) But his story grew far worse than disappointing. Rescued and flown to a hospital in Punta Arenas, in the Patagonia region of southern Chile, he was given a diagnosis of peritonitis, and he died on Sunday. He was 55.

An undertaking requiring enormous physical strength and stamina, Mr. Worsley's final journey was "a feat of endurance never before achieved," as he described it. (A Norwegian explorer, Borge Ousland, crossed Antarctica alone and unsupported in 1996-97, but he used a kite to pull his sled. In 2012, **a British woman, Felicity Aston, skied alone**

across Antarctica, but she had two supply drops.

INTRODUCTION: Vector **A**: Amundsen Sea to Berkner Island: 800 miles at 53° N of East., Vector **B**: Berkner Island to South Pole: 500 miles at 45° South of East., Vector **C**: S. Pole to Ross Ice Shelf: 400 miles directly south.

QUESTION: Find resultant displacement **R**: Amundsen Sea to Ross Ice Shelf? Both magnitude & direction needed.

ANSWER: $R = 841.2$ miles at 7.75° South of East