Missionary, Crocodiles, Tigers, and Calculus

One day as Slick Rock was walking home from work, he noticed that a large tent had been erected in a vacant lot and that a revival meeting was being held. As he stopped to listen, he heard an amazing story. The speaker had been a missionary stationed on the north side of a large lake in a region inhabited by huge tigers. The story involved the missionary's journey to the mission station. A guide took her to the south side of the lake, and showed her a small rowboat. She was to find her own way from there. The north side of the lake appeared to be a straight line running east and west. The mission station was 0.25 miles across the lake and 0.5 miles to the west. The missionary estimated that she could row at a rate of 1 mph, and she could walk through the thick jungle on the north side at a rate of 2 mph. At first she thought that she might take the boat directly to the mission station, but then she noticed the huge crocodiles in the water. She then determined to row directly to some point on the shore, and then walk the rest of the way through the tiger-infested jungle. Where should she land on the north side of the lake in order to minimize her total travel time?