Math 120
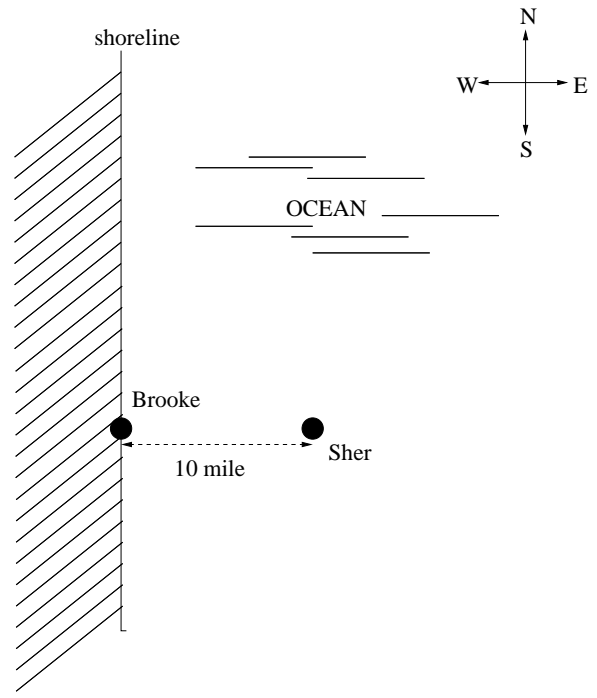28September2000
Quiz #1 (20 points)

Name ▬▬▬▬▬▬▬

TA: ▬▬▬▬▬▬▬

Instructions: You have 25 minutes for this quiz. You **MUST** show work for credit. No credit for answers only. If in doubt, ask for clarification. NO GRAPHING CALCULATORS ALLOWED. Use 2 decimal places of accuracy. Note that the second question has three parts.

1. (6pts) During a typical evening, *Zeek's pizza* will recieve phone orders for delivery at a constant rate of 3 pizzas every 12 minutes. How many pizzas will they sell in 4 hours?

2. (14pts) Brooke are Sher are talking on their cell-phones. Brooke is standing on the beach and Sher is in a boat 10 miles offshore (as pictured; view from above). Sher starts moving 2 miles/hour North and Brooke begins walking South along the beach 4 miles/hour; they continue to talk as they move.

(a) (4pts) Where are the women located after 2 hours?(You need to give precise coordinates in some imposed coordinate system.)

shoreline

N
W ← → E
S

OCEAN

Brooke

Sher

10 mile

(b) (8pts) Brooke has a cellphone with maximum reception range of 18 miles. How long can they talk before losing cellphone contact?

(c) (2pts) Assume both women keep moving after they lose cellphone reception. When Brooke reaches a location 7 miles South of her starting location, where is Sher located? (Give Sher's coordinates using an imposed coordinate system.)