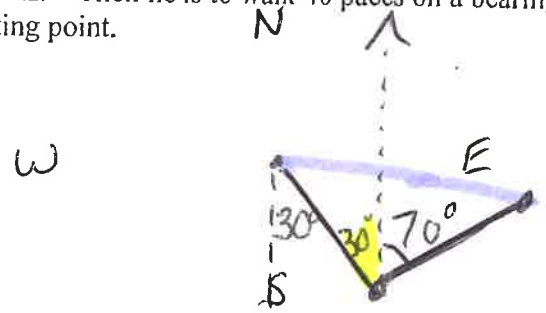
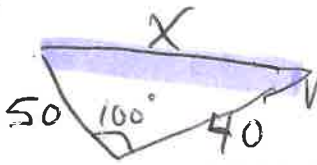
Pre-Calc: **Bearing Practice #1** Name: Class Examples

For each make a diagram and show your work in solving.

1. Devon is looking for buried treasure. His map tells him to walk 50 paces on a bearing of S 30° E. Then he is to walk 40 paces on a bearing of N 70° E. How far is he from his starting point.



$X^2 = 50^2 + 40^2 - 2(50)(40) \cdot \cos 100^\circ$



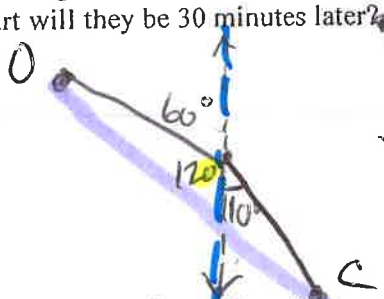
$X^2 = 4794.6$

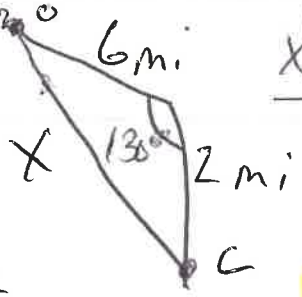
$X \approx 69.2$ paces

2. Sydney is running a cross country course. She runs 2 miles on a bearing of S 35° E. She then runs 3 miles on a bearing of N 50° E. What is the total length of the course to the nearest hundredth of a ~~meter~~?

miles

3. Oliver and Chino leave Pioneer at the same time. If Oliver rides his bike at a rate of 12 mph on a bearing of N 60° W and Chino walks at a rate of 4mph on a bearing of S 10° E how far apart will they be 30 minutes later?



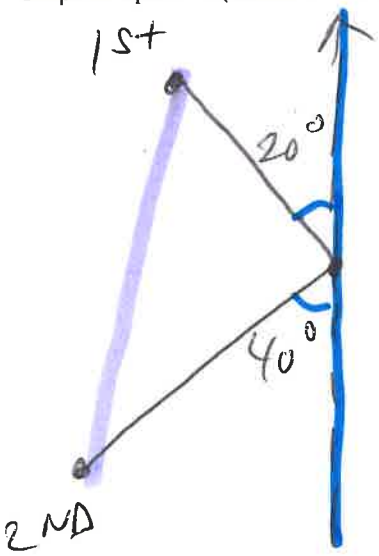


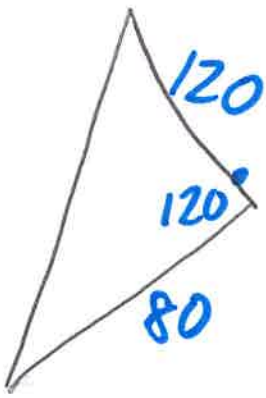
$X^2 = 6^2 + 2^2 - 2(6)(2) \cdot \cos 130^\circ$

$X^2 = 55.4$

$X = 7.4$ miles

4. Two ships leave port at 9am. One ship is sailing at 30 knots on a bearing of N 20° W. The second ship is sailing at 20 knots on a bearing of S 40° W. How far apart are the ships at 1pm? (round to the nearest tenth of a knot)





$X^2 = 120^2 + 80^2 - 2(120)(80) \cdot \cos 120^\circ$

$X \approx 174.4$ nautical miles

5. Lizzie and Rachel leave Pioneer at the same time. Lizzie walks at a rate of 4 mph on a bearing of N 70° E. Rachel walks at a rate of 3.5 mph on a bearing of S 10° W. How far apart are the ladies after one hour.

6. Jahi has joined an orienteering club. His map tells him to walk 130 paces on a bearing of N 54° E. Then he is to walk 65 paces on a bearing of S 20° E. How far is he from his starting point.

7. Halley is running in a charity event. She runs 1.7 miles on a bearing of S 48° W. She then runs 1.3 miles on a bearing of N 36° W. Finally she runs back to the starting point of the race. What is the total length of the course to the nearest tenth of a meter?

8. Tevis and Mike leave Pioneer at the same time. Tevis walks at a rate of 3.5 mph on a bearing of S 10° W. Mike walks at a rate of 3.2 mph on a bearing of S 70° W. How far apart are the gentlemen after fifteen minutes.

Bearing Problem Practice #2 Name: _____

For each make a diagram and show your work in solving.

1. Joe is looking for a new route to the store. His map tells him to walk 35 paces on a bearing of N 75° W. Then he is to walk 26 paces on a bearing of S 13° W. How far is the store from his starting point.

2. Marissa is walking through the Central Park. She walks 1.2 miles on a bearing of S 42° W. She then walks 1.3 miles on a bearing of N 12° E. She then walks back to her starting point. What is the total distance that she walked?

3. Tommy and Cam leave Pioneer at the same time. If Tommy drives at 24 mph on a bearing of N 10° E and Cam walks at a rate of 4mph on a bearing of S 80° W how far apart will they be 15 minutes later?

4. Two ships leave port at 10am. One ship is sailing at 20 knots on a bearing of S 20° W. The second ship is sailing at 25 knots on a bearing of S 75° W. How far apart are the ships at 1pm? (round to the nearest tenth of a knot)