Pre-AP Precal WS Heading and Bearing Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Draw the following headings and bearings.

N 50° W S 40° E S 30° W N 20° E

50° 250° 310° 130°

For the following problems, draw a diagram and solve.

2. A ship travels at a speed of 20 mph for 3 hours on a bearing of 200°. It then changes directions and travels at a speed of 30 mph for 2 hours on a bearing of 330°. Find the angle between the two paths.

3. A ship leaves port at noon and has a heading of S 29° W. The ship sails at 20 knots per hour. How many nautical miles south and how many nautical miles west does the ship travel by 6:00pm?

4. An airplane flying at 600 miles per hour has a bearing of 52°. After flying for 1.5 hours, how far north and how far east has the plane traveled from its point of departure?

5. A surveyor wants to find the distance across a pond. The heading from A to B is N 32° W. The surveyor walks 50 meters from A to C, and at C the heading to B is N 68° W.

B

a) Find the heading from A to C.

b) Find the distance from A to B.

C

A

6. A ship is 45 miles east and 30 miles south of port. The captain wants to sail directly to port. What angle should the captain take? Give answer in heading & bearing notation.