1. Radar stations A and B are on an east-west line, 3.7 miles apart. Station A detects a plane at C, on a bearing of 610. Station B detects the plane at a bearing of 3210. Find the distance from A to C. ANS: 2.92 mi
2. Driving along a straight flat stretch of Arizona highway, you spot a particularly tall saguaro ("suh-WARH-oh") cactus right next to a mile marker. Watching your odometer, you pull over exactly two-tenths of a mile down the road. Retrieving your son's theodolite from the trunk, you measure the angle of elevation fromyour position to the top of the saguaro as 2.4°. Accurate to the nearest whole number, how tall is the cactus? ANS: 44.26ft
3. Two ships leave port at 4 p.m. One is headed at a bearing of N 38 E and is traveling at 11.5 miles per hour. The other is traveling 13 miles per hour at a bearing of S 47 E. How far apart are they when dinner is served at 6 p.m.? ANS: 36.18 mi
4. The distance on a map from the airport in Miami, FL to the one in Nassau, Bahamas is 295 kilometers due east. Bangor, Maine is northeast of both cities; its airport is 2350 kilometers from Miami and 2323 kilometers from Nassau. What bearing would a [plane](javascript:def('/Glossary/glossaryterm.aspx?word=Plane%20',%20500,%20500);) need to take to fly from Nassau to Bangor? ANS: N1.64E
5. After the hurricane, the small tree in my neighbor’s yard was leaning. To keep it from falling, we nailed a 6-foot strap into the ground 4 feet from the [base](javascript:def('/Glossary/glossaryterm.aspx?word=Base',%20500,%20500);) of the tree. We attached the strap to the tree 3½ feet above the ground. How far from vertical was the tree leaning? ANS: 16.07
6. A plane flies 1.3 hours at 110 mph on a bearing of . It then turns and flies 1.5 hours at the same speed on a bearing of . How far is the plane from its starting point?

ANS: 218.3 mi

1. You are taking a flight from Daytona Beach to St. Louis. There is a stopover in Atlanta. The bearing from Daytona Beach to Atlanta is N 38.3° W. The bearing from Daytona straight to St. Louis is N 43.4° W . The distance of the first leg of the trip from Daytona to Atlanta is approximately 599.8 kilometers. From Atlanta to St. Louis is another 748.4 kilometers. What is the total [length](javascript:def('/Glossary/glossaryterm.aspx?word=Length',%20500,%20500);) of the trip with the stopover? How much shorter would it be to fly straight to St. Louis from Daytona Beach without a stopover? ANS: 1348.2 km, 3.61 km