yards, *EA* 230 yards, *AC* 350 yards, and *AD* 360 yards. Draw a diagram of the field on a scale whose representative fraction is $\frac{1}{3000}$, and find the area.

36. A telescope is mounted so that it has a range of the sea from the east to the north. A ship sailing in a north-west direction appears in view and continues on the same course. Her nearest distance away was 5 miles. For how many miles did she sail within view?

37. Describe regular pentagons on bases of 3 and $1\frac{1}{2}$ inches long respectively and compare their areas.

38. I observe the angle of elevation of the top of a tree to be 15°, and that of a taller tree behind it to be 30°. I walk 30 yards towards them, and at the point reached notice that their tops are in a straight line at a common elevation of 45°. Find the heights of the trees and the distance between them.

39. A buoy is moored 400 yards from a shore from which the land has an upward slope, first of 20° to the horizon for 500 yards, and then of 35° for 400 yards. How high above the buoy is the top of the slope? Express the answer in (1) degrees and (2) yards.

40. *A*, *B*, and *C* are three towns in a level country. *A* is 2 miles west and 5 miles north of *B*. *C* is 5 miles west and 8 miles south of *B*. Plot these points. Measure the distances between the towns. What direction is *C* from *A*?