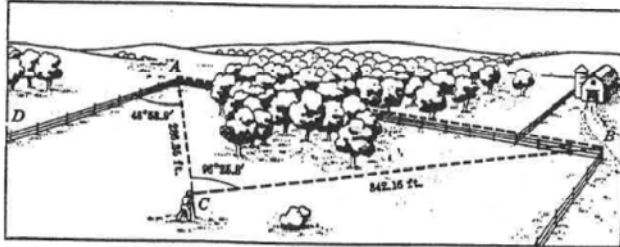


Pre Calculus

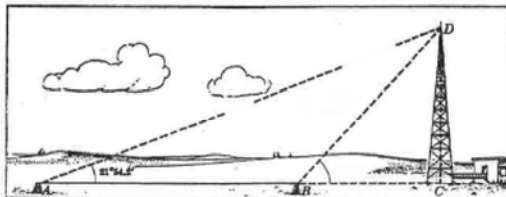
LSC #2

- When the sides DA and AB of a field are being surveyed (see sketch), a thick wood prevents the measurement of the obtuse angle DAB and the length of AB . A point C is



chosen in the field 286.35 feet from A and 342.16 feet from B , and the angle ACB is measured as $96^\circ 25.8'$. Find the length of AB . Also, if the angle DAC is measured as $48^\circ 53.9'$, find the angle DAB .

- Main and South Streets meet at an angle of $73^\circ 26'$. A triangular corner lot has a frontage of 218.7 feet and 165.4 feet on the two streets, respectively. How much land does the lot contain?
- A triangular lot has sides 46.7 feet, 58.3 feet, and 64.8 feet long. Find the capacity in gallons of the largest upright cylindrical storage tank 24 feet high that can be placed on the lot. (1 gallon = 231 cubic inches.)
- Two points, A and B , are in line with a radio tower and in the same horizontal plane with its base. (See sketch below.) The angles of elevation of the top of the tower from A and B are



$21^\circ 54.2'$ and $48^\circ 15.7'$, respectively, and the distance AB is 162.28 feet. Find the height of the tower.