9E Problem Solving

1. The diagram shows the locations of four mobile phone masts in a field. BC = 75m, CD = 80m, angle $BCD = 55^{\circ}$ and angle $ADC = 140^{\circ}$ The masts must be at least 70m apart so that they do not interfere with each other. Given that A is the minimum distance from D, find the distance AB.

