**9E Problem Solving**

1. The diagram shows the locations of four mobile phone masts in a field. $BC=75m$, $CD=80m$, angle $BCD=55^{°}$ and angle $ADC=140^{°}$

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.

