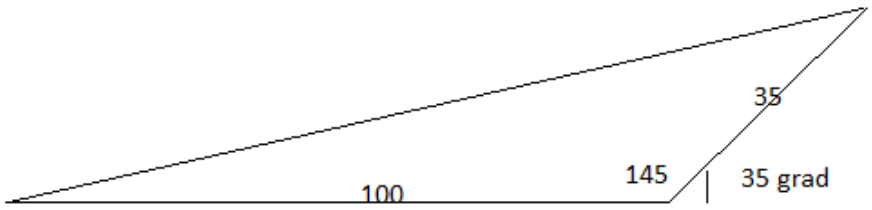
A skier moves 100.0 m horizontally, and then travels another 35.0 m uphill at an angle of 35.0º above the horizontal. What is the skier's displacement from his starting point? (Use the graphical method to answer and include your scale on the graph paper.)



Displacement is found due to cosines law:

X^2=100^2+35^2 - 2*100*35*cos(145)=16 959

X=130 m.