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**EXPERIMENT 1 (Pure Pursuit Problem)**

**CODE**

xb=[80;90;99;108;116;125;133;141;151; 160;169;179;180]

yb=[0;-2;-5;-9;-15;-18;-23;-29;-28;-25;-21;-20;-17]

xf=0

yf=50

V=20

function [**D**]=Dist(**XB**, **YB**, **XF**, **YF**)

**D**=sqrt((**YB**-**YF**)^2+(**XB**-**XF**)^2) // error was here

endfunction

function [**xf**, **yf**]=NextPos(**XB**, **YB**, **XF**, **YF**, **V**)

[d]=Dist(**XB**,**YB**,**XF**,**YF**)

sin0=(**YB**-**YF**)/d

cos0=(**XB**-**XF**)/d

**xf**=**XF**+**V**\*cos0

**yf**=**YF**+**V**\*sin0

endfunction

for i=1:12

[d]=Dist(xb(i),yb(i),xf,yf)

disp(d)

if d <=10 then

disp("bombed")

break

elseif i > 12 then *//error was here*

disp("bomber escaped")

else

[xf,yf]=NextPos(xb(i),yb(i),xf,yf,V)

end

end;

OUTPUT







