

Pure_Persuit_Problem_Bomber_Fighter

```
import random
import math
flag = 0
vf = 20
time = 0

xf = random.randint(1,1000)
yf = random.randint(1,1000)
xb = random.randint(1,1000)
yb = random.randint(1,1000)

while flag == 0:
    distance = math.sqrt((xf-xb)**2 + (yf - yb)**2)

    if distance <= 100:
        print("The Bomber Plane Shot Down at time", time)
        flag = 1
    elif distance > 1000:
        print("The Bomber Plane Escape at time ",time)
        flag = 1
    else:
        xf = xf + vf*(xb-xf)/distance
        yf = yf + vf*(yb-yf)/distance
        xb = random.randint(1,1000)
        yb = random.randint(1,1000)
        time+=1
```