Plane 1 leaves city A at 7 am and flies at a speed of 250 mph in a straight line towards city B, located 1000 miles North of city A.

Plane 2 leaves city C located 300 miles East and 400 miles North of city A at 7:30 am and flies West at a speed v mph.

The planes fly at the same altitude. For which value of v do they collide ?

Denise stands 28 feet East and 120 feet South of Aaron. Timothy stands 80 feet East and 78 feet North of Denise. Then Aaron walks due South until he is exactly 100 feet from Denise at P. When Aaron is at P, what is his distance from Timothy ?