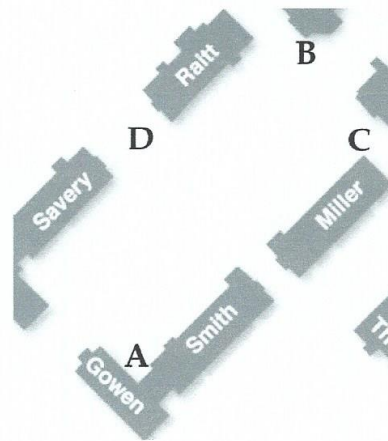


8. At noon, Alex exits Smith Hall at point A on the map shown and starts walking at constant speed directly towards the Art building (point B), hoping for a cup of coffee at Parnassus. She gets to point B after 60 seconds.

At the same time (noon), Matt is at point C (near the Music building), walking straight towards point D at a uniform speed of 2 feet per second, rushing to his next class.

Point B is 60 feet east and 110 feet north of point A . Point D is 80 feet due north of point A , and point C is 70 feet due east of point D .

Impose a coordinate system with the origin at point A .



- (a) Determine parametric equations for Alex's coordinates t seconds past noon.

- (b) Determine parametric equations for Matt's coordinates t seconds past noon.

- ~~(c)~~ What is the closest distance between Matt and Alex during their treks across the Quad?

SKIP (NEXT WEEK)

Plane 1 is flying North with a speed of 200 mph and at time $t=0$ is located 300 miles North of a control tower. Plane 2 is flying in a straight line towards the control tower with a speed of ~~150~~ 150 mph and at time $t=0$ is located 50 m East and 100 miles S of the control tower. What is the distance between the planes at time t ?