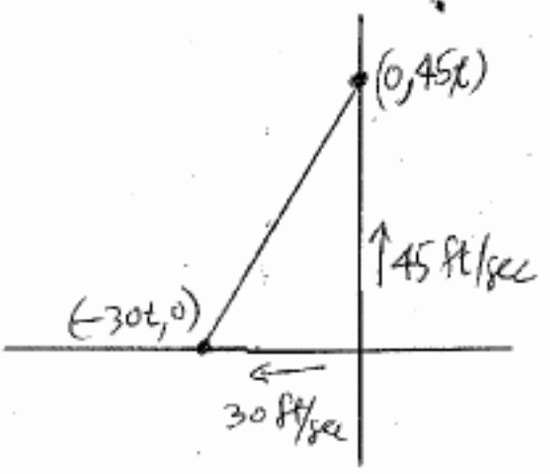
Quiz #1 Math 120A 8:30

You will have 15 minutes to complete this quiz - closed book, closed notes. You must show all of your work. No credit will be given for right answers without any work shown. The grader must be able to understand each calculation you make on your calculator.

Name:_____

Student Number:_____

Two cars depart from a four way intersection, one heading north traveling at the constant speed of 45 ft/sec and one traveling west at the constant speed of 30 ft/sec. Find the location of the cars when they are exactly 5000 feet apart. Draw a picture.




After $t$ sec., one car at $(0,45t)$, the other at $(-30t,0)$

want: $5000 = \sqrt{(-30t)^2 + (45t)^2}$

$t = \frac{5000}{\sqrt{2925}} \approx 92.45$ sec.

Location: $(0, 4160.25\text{ ft})$ i.e. 4160 ft north of intersection

and $(-2773.50\text{ ft}, 0)$ i.e. 2773.50 ft east of intersection

SEE ALSO MATH 120 HOME PAGE.