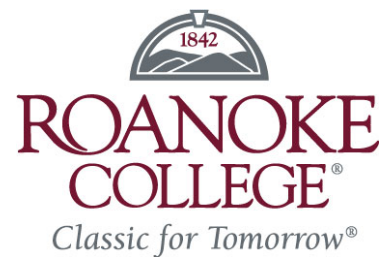


MAA – MD/DC/VA Section

10.27.12

*Technology in a Mathematics Classroom: Tablet
PC's, Moodle Integration, and Mathematica*

Dr. Chris Lee
Roanoke College



Technology in the classroom – large number
of options

- Tablet PC's
- Learning Management System
- Mathematica
- ~~Clickers~~
- ~~iPads~~

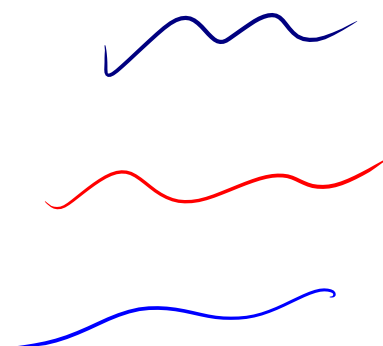
Embrace technology – your students did a long time ago...

Why use a tablet pc?

- Pros
 - Easier for students to see
 - Never turn your back to students
 - Online posting of notes – integration with LMS
 - Seamless live running of software
 - Cutting/pasting from texts and software|
 - Permanent record of what you did in class
- Cons
 - Management of space – how much is visible at once



Today we



63. The thrust of an airplane's engine produces a speed of 600 mph in still air. The plane is aimed in the direction of $\langle 2, 2, 1 \rangle$ and the wind velocity is $\langle 10, -20, 0 \rangle$ mph. Find the velocity vector of the plane with respect to the ground and find the speed.

one day in calculus

Tablet Based notes should supplement, not replace students taking notes in class.

one day in Applied Diff' Eqn



Integration of Moodle (LMS in general)

- Communication with students / distribution of materials
- Paperless grading
 - Work submitted online, then marked up in .pdf (tablet) then returned
 - Online quizzes
- Real-time gradebook, automatic submission of midterm and final grades



[Return to my normal role](#)

Course Menu

- Calendar
- Gradebook
- Messages
- Resources
- Assignments
- Quizzes
- Outline
 - Course Syllabus
 - Class Notes - No...
 - Daily Reading Qu...
 - Lab Downloads
 - Completed Lab Up...
 - MCSP Conversatio...

Activities

- Assignments
- Quizzes
- Resources

Search Forums

Advanced search [?](#)

Administration

Topic outline

1	Course Syllabus Math 122 Syllabus Fall 2012	<input type="checkbox"/>
2	Class Notes - <i>Notes are uploaded following each class session, please notify me if files are missing.</i> Folder of Class Notes, Fall 2012	<input type="checkbox"/>
3	Daily Reading Quizzes 10.3 Reading Quiz	<input type="checkbox"/>
4	Lab Downloads Lab 6 download	<input type="checkbox"/>
5	Completed Lab Uploads Lab 6 Upload	<input type="checkbox"/>
6	MCSP Conversations Series Schedule Fall 2012 Schedule	<input type="checkbox"/>

Calendar

October 2012

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Events Key

- Global
- Course
- Group
- User

Datatel Integration

[Back to MyRoanoke](#)

Campus Pack

- Campus Pack Collaboration Space

Search Forums

Advanced search [?](#)


Latest news

(No news has been posted yet)

Preview 10.3 Reading Quiz

Start again


Note: This quiz is not currently available to your students

1  What does it mean when the dot product of two vectors A and B is equal to zero?

Marks: 1

Choose one answer.

- a. $A = 0$
- b. $B = 0$
- c. $A = 0$ or $B = 0$
- d. A and B are perpendicular

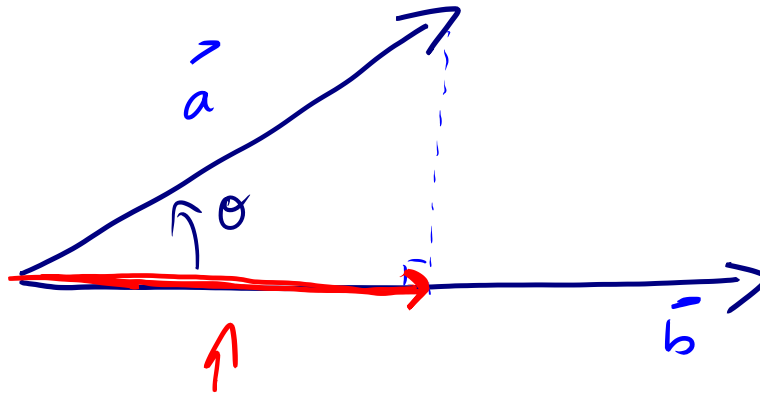
2  How does the dot product relate to the angle between vectors?

Marks: 1

Choose one answer.

- a. $A \cdot B = \sin \theta$
- b. $A \cdot B = \cos \theta$
- c. $A \cdot B = \theta$
- d. none of the above

10.3.4 : What is the difference between a component and a projection?	A component is a scalar, a projection is a vector	(1.00)	5/6	(83%)
	A component is a vector, a projection is a scalar	(0.00)	0/6	(0%)
	Component is the magnitude of projection	(0.00)	0/6	(0%)
	They are the same thing	(0.00)	1/6	(17%)



length of this vector is the component of \vec{a} in the direction of \vec{b} .

$$\begin{aligned}
 \text{Comp}_{\vec{b}} \vec{a} &= \|\vec{a}\| \cos \theta \\
 &= \frac{\|\vec{a}\| \|\vec{b}\| \cos \theta}{\|\vec{b}\|} \\
 &= \frac{\vec{a} \cdot \vec{b}}{\|\vec{b}\|}
 \end{aligned}$$

Questions?

