

Just-in-time Precalculus Reviews for Calculus Students

Jeffry L. Hirst* and William C. Bauldry

Appalachian State University

JMM in San Diego

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These slides are available at: www.mathsci.appstate.edu/~jlh

The problem

Many Calculus I students have poor recall of basic algebra and precalculus skills. The Calculus I syllabus offers very little time for review.

One possible solution

In Fall 2007, we offered weekly online precalculus reviews for the students.

- Reviewed material was used that week.
- Review was independent, outside class, and graded.
- Questions were linked to supporting material.
- We used MathZone from McGraw-Hill.

MathZone Features

- MathZone is a course management system.
- Instructors may use materials from a variety of McGraw-Hill texts, including precalculus (e.g. Barnett, Zygler, and Byleen) and calculus (e.g. Smith and Minton).
- Pre-built question databases include links to supporting materials.
- MathZone access may be purchased separately from text adoptions.

Note: McGraw-Hill provided one semester of access to MathZone for our students for the purposes of this experiment.

This assignment is due October 4 2007, 11:45 PM [EDT](#).

[Previous](#)

[1](#) [2](#) [3](#) [4](#) [5](#)

[Next](#)

[Assignment Printout](#)

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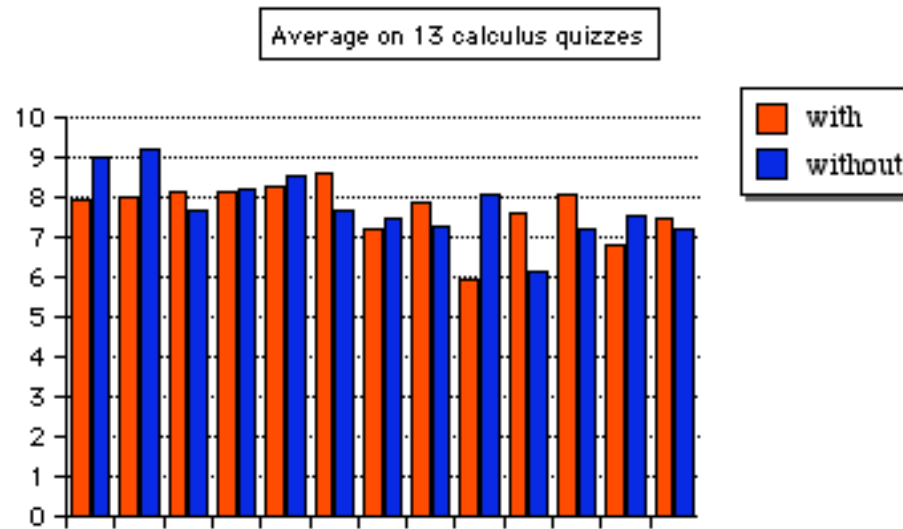
Solve for the variable a in terms of the other variables.
 $A = 9ab + 7ac + 5bc$ (surface area of a rectangular solid)

[Click here to answer the question.](#)

	$+$	sin
	\times	cos
	\leq	tan
	\geq	asin
	∞	acos
	R	atan

	Question
	Hint
	Show Me
	Help
	Link to Text

Student Performance



	n	mean quiz score	median quiz total
with	62	7.70	102
without	55	7.79	103

Student's t -test results: $t = -0.299$, std dev=0.768

The probability of this result (assuming null hyp) is 0.768.

Student Comments

Likes: The hint feature.

Dislikes: Palette does not provide syntax warnings.

What is a fair price for one semester's access? \$12.82

Instructor Comment

This provides the students with a clear indication of exactly what material I consider to be “important prerequisites.” There seemed to be fewer questions about this material in lecture.