

**READING LIST WITH CHECK LIST FOR
MATH 4371**

The following is a list of the required and recommended readings for MATH 4371. Please record the time and date you read the given selection in the space provided. Also record your impressions and conclusions pertaining to the given selection in the space provided under the listing.

1. PROFESSIONAL STANDARDS FOR TEACHING MATHEMATICS, NCTM, 1991, pp 1-62 required. pp 71-115 recommended.

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2. CURRICULUM & EVALUATION STANDARDS FOR SCHOOL MATHEMATICS, NCTM, 1989, pp 1-12 required. pp 15-116 recommended. (multiple copies on reserve)

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3. "In the Beginning: Mathematical Preparation for Elementary School Teachers" by G.S. Young, COMAP. 30 pages .

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4. A CALL FOR CHANGE, MAA NOTES, 1991, Leitzel, editor. 41 pages.

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5. "On the Mathematical Preparation of Elementary School Teachers," Conference at University of Chicago, 1992, 17 pages.

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6. "Effects of Hand-Held Calculators in Precollege Mathematics Education," by Hembree/Dessart, **Journal for Research in Mathematics Education**, **17**, (1986): 83-99.

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7. "Research on Graphing Calculators," by P.H. Dunham & T.P. Dick, **MATHEMATICS TEACHER**, **87**, no 6 (1994), 440-445.

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8. "Are Calculators a Crutch?" by Z. Usiskin, **Mathematics Teacher** **71**(May 1978):412-413.

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9. "Does Using Calculators Work? The Jury is Almost In," by P. Dunham, **UME Trends**, 5 (May 1993): 8-9.

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10. The following 3 articles are all to be found in **PROCEEDINGS OF THE FIFTH ANNUAL INTERNATIONAL CONFERENCE ON TECHNOLOGY IN COLLEGIATE MATHEMATICS**, ed Lewis Lum, Addison-Wesley Publishing, 1992. You are required to read at least 2 of them. (2 copies on reserve: #619-1968 and #619-1976)

a. "Alternative Forms of Assessment," by L.Boyd and S. Ross, 152-155.

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b. "Evaluation and Categorization of Educational Software for Classroom and Resource Center," by W. Mackey, 582-584.

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c. "Computers and Calculators in Mathematics Education: Current Teachers' Perspectives," by L. Meyer, 679-682.

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11. The following 10 articles are all in **CALCULATORS IN MATHEMATICS EDUCATION, 1992 YEARBOOK OF NCTM**, NCTM 1992. You are required to read at least 6 of them. (2 copies on reserve: #619-1992)

a. "The Potential for Calculators to Transform Elementary School Mathematics," by G.Wheatley & R. Shumway. pages 1-8.

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b. "Calculators in the Middle Grades: Access to Rich Mathematics," by N.Branca, B. Breedlove, & B.King. pages 9-13.

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c. "The Graphing Calculator: A Tool for Change," by G. Burrill. pages 14-22.

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d. "CAN: Calculator Use in the Primary Grades in England and Wales," by H. Shuard. pages 33-45.

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e. "A Constructivist Approach to Developing Early Calculating Abilities," by I. Sugarman. pages 46-55.

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f. "Decimals and Calculators Make Sense!" by D. Huinker. pages 56-64.

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g. "Concept Development and Problem Solving Using Graphing Calculators in the Middle School," by C. Vonder Embse. pages 65-78.

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h. "Calculators in the UCSMP Curriculum for Grades 7 and 8," by D. Hirschhorn & S. Senk. pages 79-90.

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i. "Super Calculators: Implications for Calculus Curriculum, Instruction, and Assessment," by T. Dick, 145-157.

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j. "Research on Calculators in Mathematics Education," by Hembree/Dessart, 22-31.

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12. **Research on Logo: Effects and Efficacy** by Douglas Clements and Julie Meredith, LOGO FOUNDATION, 1992,
<http://el.www.media.mit.edu/groups/logo-foundation/Publications/Research-on-Logo.html>.

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13. **AA Comparative Technology Course for the Prospective Elementary School Teacher**,@by Gary A. Harris *Electronic Proceedings of the Eighth Annual International Conference on Technology in Collegiate Mathematics*, Editors: Przemyslaw Bogacki, Earl D. Fife, and Larry Husch, [<http://archives.math.utk.edu/ICTCM/EP-8.html>]

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14. **The Nine Hour Mathematics Sequence for the General Pre-service Elementary Teacher at Texas Tech University**,@by Gary A. Harris and J. Dalton Tarwater, *PRIMUS*, VII, no. 4 (December, 1997), 341-360.

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15. **Remarks of Richard W. Riley, U. S. Secretary of Education: The State of Mathematics Education: Building a Strong Foundation for the 21st Century**,@a speech to AMS and MAA, January 8, 1998. [<http://www.ed.gov/Speeches/01-1998/980108.html>]

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The following 2 articles should be of interest to anyone who plans to teach middle school in Texas. They are on reserve but optional reading for this course.

Learner-Centered Schools for Texas: a Vision of Texas Educators, Texas Education Agency, Austin Texas, 1995.

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Pursuing Excellence (Initial findings from the Third International Mathematics and Science Study, TIMSS), U.S. Department of Education, Washington DC, 1996. (Recommended portions: **Key points** section of all chapters, all of Chapter 3, all of Chapter 4, and the Conclusions.) (1 copy on reserve)

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