

Math 45 – Role of Technology in Mathematics Education

Due: Wednesday, January 30

Read at least 4 articles relevant to the role that technology has in mathematics education for grades K-12. Suggested resources include the Texas Instruments website (www.ti.com/calc), the National Council of Teachers of Mathematics *Principles and Standards for School Mathematics* found at www.nctm.org/standards, Seymour Papert (search on ‘Seymour Papert’ and choose from the items that result from the search), and spreadsheets other software tool such as Geometer’s Sketchpad, Gears, Factory, etc (search on ‘spreadsheets and mathematics education’, for example)

Paper

Hand in a typed paper not to exceed 6 pages (not including photocopies of articles). Arrange contents of the paper in order outlined below and on the score sheet. Correct spelling and grammar are. Include the following sections in your paper.

A. Introduction

- Define *technology*
- Discuss the appropriate use of technology in education
- Describe your experience of the use of technology as you remember being engaged with it in K-12 grades.

B. Three types of technology: calculator, Internet, spreadsheet or other software tool such as Geometer’s Sketchpad, Gears, Factory, etc. Include a discussion of each item listed below for each technology. Use subheadings as listed on score sheet to indicate the start of each section:

- Define each type of technology
- Describe an activity for each technology that you have used and/or interacted with either as a student or for this project – cite resource/location of each activity.
- Discuss what you learned from the activity that was:
 - a. New to you in the use of technology
 - b. The same as your prior experience and knowledge regarding the use of technology in teaching.

C. Conclusion

- Discuss some pros of using technology
- Discuss some cons (or some cautions) of using technology
- Discuss your personal opinion of using technology

D. Resources

- List resources using the following format: “name of article”, author, date, web address (HINT: test the URL to be sure that it is accessible as given).
- Photocopy of the article.

A. Introduction: Definition of Technology

- Definition (discussion and resources cited) 3 pts ____
- Appropriate use (discussion and resources cited) 3 pts ____
- Personal K-12 experience 3 pts ____

B. Three Technologies

Calculator

- Definition (discussion and resources cited) 3 pts ____
- Activity (discussion and resources cited) 3 pts ____
- Activity resource/location – copy included (discussion and resources cited) 3 pts ____
- New information from activity 3 pts ____
- Similar experience from activity 3 pts ____

Internet

- Definition (discussion and resources cited) 3 pts ____
- Activity (discussion and resources cited) 3 pts ____
- Activity resource/location – copy included (discussion and resources cited) 3 pts ____
- New information from activity 3 pts ____
- Similar experience from activity 3 pts ____

Spreadsheet or other software tool

- Definition (discussion and resources cited) 3 pts ____
- Activity (discussion and resources cited) 3 pts ____
- Activity resource/location – copy included (discussion and resources cited) 3 pts ____
- New information from activity 3 pts ____
- Similar experience from activity 3 pts ____

Conclusion

- Pros (discussion and resources cited) 3 pts ____
- Cons/Cautions (discussion and resources cited) 3 pts ____
- Personal opinion 3 pts ____
- Photocopy of each article 3 pts ____

Mechanics

- Grammar, spelling, 2 pts ____
- Organization, use of headings and subheadings 2 pts ____
- Grade sheet turned in with report. 2 pts ____

Total Points: 72 pts _____ Letter Grade: _____

Late Penalty: 10% per day

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