Final Examination
EDU 271

I.   Find the sum of $87762_{\text{base }9} + 8_{\text{base }9}$

II. Which is greater $3^{90}+3^{90}+3^{90}$ or 3^{100} ?

III. Identify and describe the error in each calculation. Demonstrate the use of base ten blocks to show each error.

    a.   167   b.   37
       _ 29   + 75
      ‾‾‾‾‾‾‾‾

         148   1012

IV. Use pattern to show that $(-1).(-1)=+1$

V.   Use the charged field model to show that $(-4).(-2)=+8$

VI. For each of the following, find t if possible. If not possible, tell why.

    a. $t3_{\text{base }6} = 33_{\text{base ten}}$

    b. $5t2_{\text{base }7} = 262_{\text{base ten}}$

    c. $t2_{\text{base }7} = 2t_{\text{base ten}}$

VII. Would the clustering strategy of estimation be a good one to use in each of the Following cases? Why or why not?

    a. 474 +1467 +31 +2445   b. 483 +475 +530+503+528

    Estimate parts (a) and (b) using the following strategies
         i.   Front-End
         ii. Grouping to nice numbers

VIII) The following calculations are incorrect. Explain how estimation might help you discover the error in one case but not in the other.

a) 74   b) 48
   * 23   * 32
   ‾‾‾‾   ‾‾‾‾
    212   96
    148   124
   ‾‾‾‾   ‾‾‾‾
   1692   220

    Which type of estimation strategy did you use?

IX) You are a math teacher and you would like to teach integer subtraction .

Suggest a set of strategies you can use to explain the above concept.

GOOD LUCK