

MATH 4010
Problem set 4
Due date: 10/17/07

Name _____

Please attach the appropriate cover sheet to your assignment. Remember that it must be stapled if you are turning in a hard copy, and it can not be late. **To get full credit you must have neat work and show all your work – with all the necessary explanations!**

(1) Create a base 4 multiplication table and a base 4 number line.

1. Use your blocks to model $3_4 \cdot 21_4$
2. Use the number line to multiply $2_4 \cdot 3_4$
3. Use a chip abacus to multiply $3_4 \cdot 213_4$
4. Use the table and the lattice method to multiply $21_4 \cdot 32_4$. You might also need the addition table from the last assignment.

(2) Model these multiplication problems using the stated methods.

(a) $23 \cdot 45$

- The distributive property
- Area model
- Intermediate algorithm

(b) $35 \cdot 24$

- Base 10 blocks
- Intermediate algorithm
- Lattice method

(3) Determine whether the property 'If $ac = bc$, then $a = b$ ' is true for whole numbers. Justify all the claims that you make.

(4) Write down your favorite three digit number to form a six digit number (e.g., 587587). Is your six digit number divisible by 7? How about 11? How about 13? Does this always work? Why?

Reflection (must be typed and labelled The State Core) Go to the Utah State Office site: www.usoe.k12.ut.us, click on Curriculum and Instruction, Content Areas, Mathematics, Elementary, Core Curriculum and either downloaded it, print it or just read it. Your reflection will be a brief first impression of the core. Focus on your reaction to strand 1 objective 3 on operations in light of what we have done in class.