

Name:

# Homework Assignment Assigned: 10/21/08

MATH 181 with Joe Champion

**Due: Tuesday, October 28<sup>th</sup> (at the beginning of class)**

**Directions:**

1. Complete the following on separate sheets of paper.
2. Full and clear explanations are critical.
3. Staple this sheet to the front of your homework submission.
4. **Start Early!** If you get stuck, see me during office hours, visit the Math Tutoring Lab, or contact someone from class for help.



Refer to the *Homework and Quiz Policies* we agreed to in class for questions about late homework or grading.

**Complete all of the following 5 items.**

1. While solving some multiplication problems, a student wrote the following. Is the student's thinking correct? If so, explain what the student is doing and use the same technique to compute  $55 \times 9$ . If the student's thinking is incorrect, explain why. (This should go beyond simply saying that the student got the wrong answer.)

A. $\begin{array}{r} 27 \\ \times 4 \\ \hline 168 \end{array}$	B. $\begin{array}{r} 34 \\ \times 6 \\ \hline 304 \end{array}$	C. $\begin{array}{r} 45 \\ \times 7 \\ \hline 495 \end{array}$
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2. Show how to solve the following problem using a tree diagram **AND** an organized list or table: Marcella is planting a garden in her backyard. She has room to plant 1 vegetable and 1 fruit bearing plant. She has contacted her local nursery to learn about varieties of plants that grow well in Laramie. They recommended 2 types of vegetables and 4 types of fruit bearing plants. How many different gardens could Marcella create with these options?
3. Solve the following: Nicole is updating her Netflix Queue, i.e., her list of movies that she wants to see in the future. Nicole enjoys action movies, dramas, comedies, and scary movies. Based on her past movie selections, Netflix has recommended she watch 4 action movies, 9 dramas, 5 comedies, and 6 scary movies. If Nicole wants to watch one movie of each type in the following order: drama, comedy, action, scary, then how many different ways could she watch these movies?
4. Use the area model (i.e., base ten blocks) to illustrate the product  $13 \times 42$ . Then, link the area model to the partial products method of multiplication and the standard algorithm.
5. Use the lattice method to compute each of the following.
  - a.  $17 \times 25$
  - b.  $1001 \times 23$
  - c.  $1,762 \times 4,467$
  - d.  $18 \times 50$