MATHEMATICS 391
STORY PROBLEMS

For each of the following, following the general story problem directions and using a story problem write-up form, write a problem, suitable for Elementary School students whose solution is the given mathematical sentence.

- Exceptions, Story problem 4.2; see specific directions there.

- See your assignment schedule for due dates. You should work on your story problems after you have completed the corresponding lab.

LAB 1, Story 1

*Story Problem 1.1 (Set Models)*
First (in your problem) define three sets and then ask a question whose solution is the intersection of these three sets.

*Story Problem 1.2 (Greatest Common Factors)*
GCF(12, 21) = _____?

LAB 2, Story 2

*Story Problem 2.1 (Numeration Systems)*
(342)_five + (104)_five = (_____)_five?

*Story Problem 2.2 (Place Value, Addition and Subtraction of Whole Numbers)*
35 + 18 = _____?

LAB 3, Story 3

*Story Problem 3.1 (Whole Number Addition)*
193 + 168 = _____?

*Story Problem 3.2 (Whole Number Subtraction)*
72 - 43 = _____?
LAB 4, Story 4

*Story Problem 4.1 (Whole Number Multiplication)*

12 x 15 = _____?

*Story Problem 4.2 (Whole Number Division)*

i. Write a problem; suitable for Elementary School students, utilizing the Number of Equivalent Subsets division setting, whose solution would be the division sentence:

150 ÷ 15 = _____?

ii. Write a problem; suitable for Elementary School students, utilizing the Number of Elements division setting, whose solution would be the division sentence:

150 ÷ 15 = _____?

- You may use one or two story problem pages for problem 4.2 i. & ii.
- For this problem, your illustration [still no manipulatives] is likely to look "modeled," that is OK. You can label a bag or set (or...?) with 150 or 15 or 10. You don't need to draw 150 objects.

LAB 5, Story 5

*Story Problem 5.1 (Decimal Number Multiplication with Measurement Units)*

5.2 feet x 4.6 feet = _____?

*Story Problem 5.2 (Whole Number Division with measurement units.)*

120 feet² ÷ 15 feet = _____?

LAB 6, Story 6

*Story Problem 6.1 (Exploring Fractional Numbers)*

Write a problem that results in comparing the relative sizes of four non-equivalent fractions.

*Story Problem 6.2 (Modeling Fractional Numbers)*

Write a problem that results in comparing four equivalent fractions.
STORY PROBLEMS FOR LABS 7, 8 & 9

LAB 7, Story 7

Story Problem 7.1 (Addition of Fractional Numbers)
\[
\frac{1}{4} + \frac{1}{6} = _____?
\]

Story Problem 7.2 (Subtraction of Fractional Numbers)
\[
\frac{3}{5} - \frac{2}{7} = _____?
\]

LAB 8, Story 8

Story Problem 8.1 (Multiplication of Fractional Numbers)
\[
\frac{3}{4} \text{ of } 12 = _____?
\]

Story Problem 8.2 (Multiplication of Fractional Numbers)
\[
\frac{4}{5} \text{ of } \frac{3}{4} = _____?
\]

LAB 9, Story 9

Story Problem 9.1 (Division of a Whole number by a Fraction)
\[
8 \div \frac{2}{5} = _____?
\]

Story Problem 9.2 (Division of a Fraction by a Fraction)
\[
\frac{3}{10} \div \frac{6}{7} = _____?
\]