

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.
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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)

$$\text{GCF}(12, 21) = \underline{\hspace{2cm}}?$$

LAB 2, Story 2

Story Problem 2.1 (Numeration Systems)

$$(342)_{\text{five}} + (104)_{\text{five}} = (\underline{\hspace{2cm}})_{\text{five}}?$$

Story Problem 2.2 (Place Value, Addition and Subtraction of Whole Numbers)

$$35 + 18 = \underline{\hspace{2cm}}?$$

LAB 3, Story 3

Story Problem 3.1 (Whole Number Addition)

$$193 + 168 = \underline{\hspace{2cm}}?$$

Story Problem 3.2 (Whole Number Subtraction)

$$72 - 43 = \underline{\hspace{2cm}}?$$

STORY PROBLEMS FOR LABS 4, 5 & 6

LAB 4, Story 4

Story Problem 4.1 (Whole Number Multiplication)

$$12 \times 15 = \underline{\quad\quad} ?$$

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:
 $150 \div 15 = \underline{\quad\quad} ?$
 - ii. Write a problem; suitable for Elementary School students, utilizing the Number of Elements division setting, whose solution would be the division sentence:
 $150 \div 15 = \underline{\quad\quad} ?$
- 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.
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LAB 5, Story 5

Story Problem 5.1 (Decimal Number Multiplication with Measurement Units)

$$5.2 \text{ feet} \times 4.6 \text{ feet} = \underline{\quad\quad} ?$$

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

$$120 \text{ feet}^2 \div 15 \text{ feet} = \underline{\quad\quad} ?$$

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)

$$[1/4] + [1/6] = \underline{\quad?}$$

Story Problem 7.2 (Subtraction of Fractional Numbers)

$$[3/5] - [2/7] = \underline{\quad?}$$

LAB 8, Story 8

Story Problem 8.1 (Multiplication of Fractional Numbers}

$$3/4 \text{ of } 12 = \underline{\quad?}$$

Story Problem 8.2 (Multiplication of Fractional Numbers}

$$4/5 \text{ of } 3/4 = \underline{\quad?}$$

LAB 9, Story 9

Story Problem 9.1 (Division of a Whole number by a Fraction}

$$8 \div 2/5 = \underline{\quad?}$$

Story Problem 9.2 (Division of a Fraction by a Fraction)

$$3/10 \div 6/7 = \underline{\quad?}$$
