Name: _____ **Date:**_____

Activity Sheet 13

Use Addition, Subtraction, Multiplication, and Division to Perform Common Work Place Mathematical Operations

Objective:

Upon completion of this activity sheet you should be able to use addition, subtraction, multiplication, and division to determine part condition.

NATEF mathematics-related academic skills covered in this activity sheet:

- Multiply whole numbers, fractions, or decimals to arrive at a solution for comparison with the manufacturer's specifications
- Analyze and solve problems requiring the use of fractions, decimals, ratios, or percentages by a direct or indirect variation of the numerical elements of the problem.

This activity sheet also covers, wholly or partially, the following NATEF language arts skills:

- Adapt a reading strategy for all written materials, e.g. customers notes, service manuals, shop manuals, technical bulletins, etc., relevant to problem identification, diagnosis, solution, and repair.

Tools and Materials: Pen or pencil

PROCEDURE:

1. You have to pay self-employed Social Security tax on a repair job that you did at your home. The vehicle owner paid you $1000.00 for the work. Your total expenses for the job were $134.50 for parts, $14.10 for filler, and $45.90 for paint. Subtracting the total for parts and supplies gives you the total that you must pay Social Security tax on. The self-employed Social Security tax is 15.3% of the taxable total. Compute the taxable income total and tax.

(Hint: 15.3% can be written as .153)

   Taxable total _____   Self-employment tax _____

2. The Internal Revenue Service allows self-employed people to reduce their self-employment tax slightly. To do this, multiply the taxable income total by .9254 before calculating the Social Security tax. Using this method compute the taxable income total and tax.

Using the tax reduction method described in this question, how much

money did you save over the method in Question 1? _____ _

Activity Sheet 13

3. Your collision repair facility works on a team system, in which the weekly commission hours of all team members are added together and redistributed equally. Last week the four person team made the following hours:

Technician A: 45 hours Technician B: 61 hours

Technician C: 35 hours Technician D: 42 hours

Which technician lost the most hours? _____

Which technician gained the most hours? _____

4. In the collision repair facility described above, the technicians are paid the following hourly rates:

   Technician A: $11.50   Technician C: $13.50

   Technician B: $12.25   Technician D: $14.00

Which technician made the most money last week? _____

Which technician made the least money last week? _____

If Technician D had been paid for the actual number of hours he made last week, would he have made more or less than under the team system?

More __ Less __ How much?

5. Solve the following problems:

7.0	.5	9.26	30	.10	17
-2	+10	-8	. + 15.0	-2.0	- .17

6	7	8	9	5	4
-3	x8	-5	x 11	-1	x4

6. Solve the following problems, converting between decimals and fractions as necessary: Activity successfully completed. Yes __ No __

Grade (if applicable) _____ _