Activity Sheet 12

Use Multiplication and Division to Determine Parts Needed

Objective:

Upon completion of this activity sheet you should be able to use multiplication and division to determine the parts needed for a particular job or situation.

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

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.

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

• Convert measurements taken using the English or metric system to specifications stated in terms of either system.

Tools and Materials: Pen or pencil

PROCEDURE:

1. The inner door panel on a certain type of vehicle requires 9 plastic dips to attach it to the door frame. A customer of your collision repair facility has a fleet of 13 of these types of vehicles, all 4-door models. How many clips would it take to replace every one of these door clips on your customer's entire fleet?

   _____

2. Your parts manager says that it would be a good idea to stock enough of the above door clips to replace all of the clips on the driver's door on five of the vehicles mentioned in Question 1. How many clips should he or she order?

   _____

3. The clips are sold in plastic bags of 10 each. How many bags will the parts manager need to order to obtain the minimum number of clips determined in Question 2?

   _____

4. You remove three of the inner door panels on one of the vehicles mentioned in Question 1. On each door panel, three of the clips are damaged and cannot be reused. How many clips must be replaced?

   _____

   On the entire vehicle, how many clips are being reused?

   _____

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5. There are six technicians in the collision repair facility, all of whom keep a stock of speed clips. You want to divide a box of 100 door clips so that each technician receives an equal amount. How do you determine how many clips to give each technician?

_____

How many clips does each technician get? _____ After the clips are distributed, are any clips left over? Yes __ No __ If yes, how many?

6. Convert the following millimeter readings to inches.

a. 50.8 mm _____ b. 177.8 mm _____ c. 25.4 mm _____

7. Convert the following inch readings to millimeters.

a. 2 ¼" _____ b. 12" _____ c. 3 " _____ d. 1 ½ " _____

8. You are asked to refill a vehicle cooling system. You know that the cooling system has a capacity of 13 quarts. It must be filled with equal amounts of antifreeze/coolant and water. To properly refill the cooling system, how much antifreeze/coolant must you add?

_____

Antifreeze/coolant is packaged in gallon containers. How many containers must be opened to add the proper amount to the above cooling system?

_____

9. Hot dogs are usually sold 8 to a package and hot dog buns are sold 10 to a package. Hot dogs are going to be served at a shop meeting. You are asked to get the hot dogs and buns for the meeting. What is the least number of packages that you can get to have the number of hot dogs and buns come out even?

_____ hot dog packages and _____ bun packages

10. One of your co-workers tells you "You need to know how many people take their hot dogs plain before knowing how many buns to get." Is this a true statement?

Yes _____ No _____ Why? _____

Activity successfully completed. Yes _____ No _____

Grade (if applicable) _____