Name:_____

Student Project Sheet

Project Title: Follow the Trail

Materials Needed:
Calculator / Paper / Pen or Pencil

Introduction – Background Information

When a dairy sends huge shipments of chocolate milk out of its processing plant, customers who receive the shipments want verification that the refrigeration unit has been working properly. Radio Frequency Identification (RFID) sensors placed in different zones of the shipping compartments register and transmit temperatures to a receiver that allows authorized users to capture the product history from the product's source to its destination. The equipment is programmed to measure and log information every 15 minutes.

Gaps in the recorded data would cause customers and supervisors to suspect problems along the way. For example, a refrigeration failure midway might be corrected before the product reached its destination, but the incident would compromise the quality of the product and its shelf life.

Verify Electronic Results

Calculate the number of log entries that would indicate a complete record of operation during transport between each of the following distribution points for a dairy's chocolate milk:

1. Chicago, Illinois, to Cleveland, Ohio

2. Chicago, Illinois, to Duluth, Minnesota

3. Denver, Colorado, to Boise, Idaho

4. Indianapolis, Indiana, to Nashville, Tennessee

5. Tulsa, Oklahoma, to Dallas, Texas

Work with these givens:

- The transportation mode is truck.
- The average driving speed is 55 miles per hour.
- The average nondriving time is 20 minutes every six hours.