Table # \_\_\_\_\_\_ Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period \_\_\_\_\_

Pre Calculus

Lesson 6: Application HOMEWORK

1. The profit on each set of CDs that is manufactured by MusicMan, Inc., is $8. The profit on a single CD is $2. Machines A and B are used to produce both types of CDs. Each set takes 9 minutes on Machine A and 3 minutes on Machine B. Each single takes 1 minute on Machine A and 1 minute on Machine B. If Machine A is run for 54 minutes and Machine B is run for 42 minutes, determine the combination of CDs (set and single) that can be manufactured during the time period that most effectively generates profit within the given constraints.
2. Define the variables.
3. Write a system of inequalities.
4. Write a function.
5. Graph the system of inequalities



1. Substitute the values.
2. Answer the problem.
3. A package delivery service has a truck that can hold 4200 pounds of cargo and has a capacity of 480 cubic feet. The service handles two types of packages: small, which weigh up to 25 pounds each and no more than 3 cubic feet each; and large, which are at most 50 pounds each and are up to 5 cubic feet each. The delivery service charges $5 for each small package and $8 for each large package. Find the number of each type of package that should be placed on a truck to maximize revenue.
4. Define the variables.
5. Write a system of inequalities.
6. Write a function.
7. Graph the system of inequalities



1. Substitute the values.
2. Answer the problem.