**Algebra 3/Trig: Dieckmann** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Systems of Equations HWK #3 Due 5/9

1. When Earl E. Bird baby-sat for 8 hours and worked at a restaurant for 2 hours, he made a total of $58. When he baby-sat for 2 hours and worked at a restaurant for 5 hours, he made a total of $40. How much does Earl get paid for each type of work?

2. A furniture company manufactures two types of desks using oak and cedar lumber. Type A requires 10 board feet of oak and 5 board feet of cedar, and type B requires 6 board feet of oak and 4 board feet of cedar. From a supply of 1000 board feet of oak and 600 board feet of cedar, how many desks of each type should be made in order to use all of the materials on hand?

3. A machine in a pottery factory takes 3 minutes to form a bowl and 2 minutes to form a plate. The material for a bowl costs $0.25 and the material for a plate costs $0.20. If the machine runs for 8 hours straight and exactly $44 is spent for materials, how many bowls and plates can be produced?

4. Sue Permann works at the local bookstore during the week and on weekends. She makes more per hour on the weekends. The first week she worked 40 hours during the week and 10 hours on the weekend. Her check was $199. The second week, she worked 30 hours during the week and 12 hours on the weekend to bring home $169.50. How much pay per hour does Sue receive both during the week and on the weekend?

Bonus: Solve the following system: $\left\{\begin{array}{c}3x+2y+z=1\\x-2y+2z=4\\2x+4y+3z=9\end{array}\right.$