Math 10C Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Systems of Equations Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Developing Systems of Equations**

1. During a clothing sale, 2 jackets and 2 sweaters cost $228. A jacket costs $44 more than a sweater.
2. Identify some variables to represent the unknown quantities in the problem.
3. Create a linear system to model this situation.
4. A store has 80 packages of wheels for inline skates and roller skates. The store sells wheels for roller skates in packages of 4 and wheels for inline skates in packages of 8. The total number of wheels in all packages is 440.
5. Identify some variables to represent the unknown quantities in the problem.
6. Create a linear system to model this situation.
7. A store display had packages of 8 batteries and packages of 4 batteries. The total number of batteries was 320. There 1.5 times as many packages of 4 batteries as packages of 8 batteries.
8. Identify some variables to represent the unknown quantities in the problem.
9. Create a linear system to model this situation.
10. The store determined that there are 30 packages of 8 batteries and 20 packages of 4 batteries. Use the linear system you created to verify that the store is correct.
11. The perimeter of a Nunavut flag is 16 ft. Its length is 2 ft. longer than its width.
12. Identify some variables to represent the unknown quantities in the problem.
13. Create a linear system to model this situation.
14. Hailey determined that the Nunavut flag is 5 ft. long and 3 ft. wide. Use the linear system you created to verify that Hailey is correct.
15. LCHS raised $195 by collecting 3000 items for recycling. The school received 5 cents for each pop can and 20 cents for each large plastic bottle.
16. Identify some variables to represent the unknown quantities in the problem.
17. Create a linear system to model this situation.
18. The school collected 2700 pop can s and 300 plastic bottles. Use the linear systems you created to verify these numbers.