Name _____

Problem Solving: Act It Out and Use Reasoning

1. A ranch owner has 18 bales of hay to distribute in 3 cow pastures and 3 horse pastures. He wants each cow pasture to have the same number of bales of hay and each horse pasture to have the same number of bales of hay. He wants at least 1 bale of hay in each pasture. How many different ways can hay be distributed among the pastures? Make a table to show your reasoning.

   _____

2. A nursery has 10 tree seedlings to give out at 2 workshops. It wants to give out a minimum of 2 seedlings at each workshop. How many different ways can the nursery give out seedlings? Show your answer as ordered pairs.

   _____

   _____

3. Graph the solution to the tree seedling problem above.

4. A reading club at a bookstore gives a certificate for one free book after the reader earns 150 points. Each book a person reads is worth 3 points. Sonja has 96 points. What is the least number of books she needs to read to get the certificate?

   A 18

   B 23

   C 23

   D 54

5. **Writing to Explain** Explain how you know you found all of the possible ways to distribute the bales of hay in Problem 1.

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