Name _____ Date _____

Challenge Practice
For use with the lesson "Find Probabilities and Odds"

In Exercises 1–5, use the following information.

You are presented with a coin, a blue bag containing five names, each on a slip of paper, and a red bag containing five names, each on a slip of paper. You are told to flip the coin. If heads results then you are to select a name from the blue bag and record the result of the coin flip and the name. If tails results then you are to select a name from the red bag and record the result of the coin flip and the name. The red bag contains the names Tom, Ann, Ben, Sam, and Greyson. The blue bag contains the names Tom, Ann, Billy, Mark, and Roseann.

  1. Write the sample space.

  2. What is the probability that Tom gets selected?

  3. What are the odds against Ann being selected?

  4. What are the odds in favor of Ann or Roseann being selected?

  5. What are the odds against Tom or Mark being selected?

In Exercises 6–14, use the following information. Assume *n* is a positive integer.

The odds in favor of event 1 are $n : n$. The odds in favor of event 2 are $m : 0$.

  6. What are the odds against event 1?

  7. What is the probability in favor of event 1?

  8. What is the probability against event 1?

  9. What are the odds against event 2?

 10. What is the probability in favor of event 2?

 11. What is the probability against event 2?

 12. What are the odds in favor of both event 1 and event 2?

 13. What is the probability in favor of both event 1 and event 2?

 14. What is the probability in favor of event 1 and against event 2?