MA 110 WORKSHEET (8.2) "EXTRA WORKSHEET 3"

Name Solutions

- 1. Convert the following odds to probabilities:
  - A. 56 to 95B. 7 to 1356/(56 + 95) = 56/1517/(7 + 13) = 7/20C. 40 to 11D. 19 to 340/(40 + 11) = 40/5119/(19 + 3) = 19/22
- 2. Convert the following probabilities to odds:
  - A. 3/5 B. 19/343 to  $(5-3) \rightarrow 3$  to 2 19 to  $(34-19) \rightarrow 19$  to 15
  - C. 0.123 D. 0.87

0.123 = 123/1000 123 to (123 - 1000) → 123 to 877 0.87 = 87/100 87 to 13

3. If the odds of winning a game are 9 to 7, what is the probability of losing the game?

The odds of losing are 7 to 9, so the probability of losing is 7/(9 + 7) = 7/16.

Or, The proability of winning is 7/(7 + 9) = 7/16. The probability of losing is 1 - 7/16 = 9/16.