

## Math 160 Logic Assignment # 1

1. In the game SubtractADivisor it is implicitly assumed that every game would have a winner. Is this true? Explain your answer. Identify any basic facts about natural numbers that you need.
2. What are the possibilities for the last move of SubtractADivisor? Explain your answer.
3. For each of the natural numbers between 2 and 10, give a complete winning strategy for SubtractADivisor for the appropriate player with that starting number.
4. Go to overleaf. Create an account using your USD email address. We will use this throughout the semester to write up solution with  $\text{\LaTeX}$ , a document preparation system, that is used almost universally by mathematicians.