

WRITTEN ASSIGNMENT # 6

MATH 38

DUE: FRIDAY 15, 2005

Read Section 1.3 and 1.4

1. Three methods of proof were discussed in Section 1.3, what were these methods?
2. What do you have to do to complete an algorithmic proof?
3. In example 1.3.8 several properties of the hypercubes are defined. List these properties.
4. When do you use a bijective proof? What do you have to do to prove a result bijectively?
5. Describe the algorithm in the proof of Theorem 1.3.19 and demonstrate it with the Petersen graph.
6. Give two examples of graphs that satisfy Theorem 1.3.23.
7. What is wrong with the failed proof in Example 1.3.24?
8. Explain how you would prove $A(n) \Rightarrow B(n)$ using induction.
9. What is a graphic sequence? Give an example of a graphic sequence and one example of a sequence that is not graphic.
10. Define a digraph. Give an example of a digraph.