LEMOYNE-OWEN COLLEGE
DIVISION OF NATURAL SCIENCES, MATHEMATICS AND COMPUTER SCIENCE

MATH 120 Thursday
Valerie Chu, Ph.D. July 11, 2002

Quiz 1

Show your work ***Name:*** _____

For Problems 1 and 2, decide whether each of them is an example of **inductive** or **deductive** reasoning.

1. Today is Thursday. Tomorrow will be Friday.

   _____

2. It has rained every day for the past five days, and it is raining today as well. So it will also rain tomorrow.

   _____

3. Use the method of successive differences to find the next term in the sequence.
   1, 2, 8, 22, 47, ……

4. 1+2+3+4+…+90=_____

5. 1+3+5+7+9+…+149=_____

6. $1^3 + 2^3 + 3^3 + ... + 20^3 =$_____

7. What is the ones digit of 3^{82} ?

8. The ratio of the number of adults to the number of children at the Wildflower Daycare Center cannot be less than 1 to 5. If there are 43 children at the center, how many adults must be present?

9. Hale County in Texas has a population of 55,671 and covers 998 square miles. About how many people per square mile live in Hale County?

10. Rob Smith goes to the racetrack with his buddies on weekly basis. One week he doubled his money, but then lost $20. He took his money back the next week, tripled it, but then lost $18. The following week he tried again, taking his money back with him. He quadrupled it, and played well enough to take that much home with him, a total of $792. How much did he start with the first week?