

Deductive reasoning is the process of proving a specific conclusion from one or more general statements.

- The statement that is proved is called a ***theorem***.

Example 4: Consider the following procedure:

Select a number. Multiply the number by 4. Add 6 to the product. Divide this sum by 2. Subtract 3 from the quotient.

- Repeat this procedure for at least four different numbers. Write a conjecture that relates the result of this process to the original number selected.
- Use the variable n to represent the original number and use deductive reasoning to prove the conjecture in part (a).