

## Inductive Reasoning

### 1. Induction by Enumeration

All A's in my sample are B's;  
My sample was large and randomly selected;  
∴ All A's in the world are probably B's.

Real world example:

All U.S. presidents I have studied are male;  
My sample of presidents was large and randomly selected;  
∴ All presidents in U.S. history have probably been male.

### 2. Induction by Analogy

All A's in my sample are B's.  
My sample was large and randomly selected;  
∴ The next A, outside my sample, will probably be a B.

Real world example:

All revolutions in my survey have been preceded by economic crises;  
My sample of revolutions was large and randomly selected;  
∴ The next revolution in the future will probably be preceded by an economic crisis.

### 3. Statistical Induction

Some percentage of A's in my sample have some characteristic B;  
My sample was large and randomly selected;  
∴ The larger population of A's will have the same characteristic B, in approximately the same proportion as the sample.

Real world example:

In a survey, some 60 percent of U.S. senators accepted bribes;  
My sample was large and randomly selected;  
∴ Approximately 60 percent of U.S. senators accept bribes.

