

Observations:

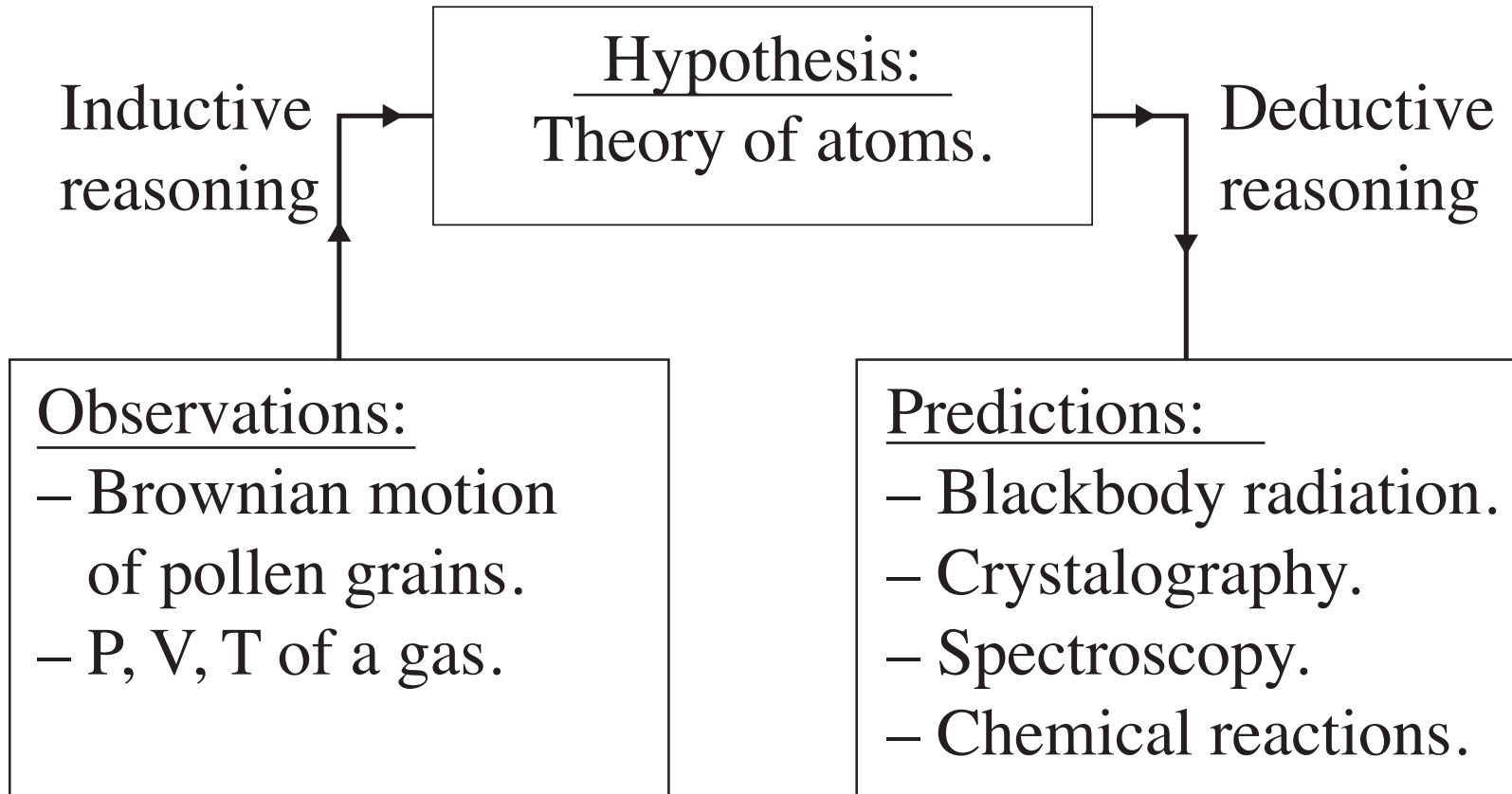
- Brownian motion of pollen grains.
- P, V, T of a gas.

Inductive
reasoning

Hypothesis:
Theory of atoms.

Observations:

- Brownian motion
of pollen grains.
- P, V, T of a gas.



Kinetic theory of gases

Assumptions:

- 1) Gas.
- 2) Large number of molecules, which make elastic collisions with the walls and with each other.
- 3) Molecules separated (on average) by distances large compared with their diameters.
- 4) Molecules exert no forces on each other (or the wall) except when they collide.
- 5) Molecules move very fast:
 - Ignore gravitational force.
 - No preferred position and no preferred direction for velocity.