

Galilean Principles of “Local” Motion

In the absence of air resistance, bodies descending from rest

- 1. In vertical descent acquire equal increments of speed in equal increments of time.**
- 2. Acquire the same speed in descending from the same height regardless of their weight or shape.**
- 3. Acquire the same speed in falling from a given height whether falling vertically or along an inclined plane.**
- 4. Acquire a speed in descending from any given height which is just sufficient to raise them to that height.**

What experimental evidence did Galileo and those in the decade following him provide in support of each of these principles; and how telling was that evidence in showing whether each holds merely to high approximation or exactly?