

Forced by the Church to give-up working on astronomical matters, Galileo returned to his experiments on the laws of motion. When he was young, he'd designed an inclined plane (which became an important apparatus in the world of science). He used that plane to measure - very accurately, as it turns out - acceleration.

As he studied the movement of balls on his inclined plane, Galileo made an important discovery which he called "the odd numbers rule." Julian Barbour describes how that works:

...if, in the first unit of time, [the ball] goes one unit of distance, in the next unit of time it travels three units of distance, and in the next, five, and in the next, seven. So it has this beautiful, numerical progression—one, three, five, seven.

Galileo's discovery of this mathematical phenomenon allowed people everywhere to predict - accurately - the motion of falling objects. His findings - published when he was 74 years old as his *Discourse on the Two New Sciences* - were later used by the great scientists who followed him, such as Isaac Newton and Albert Einstein.

Church officials may have banned some of Galileo's writings, but they could not really ban his ideas. They were used by succeeding generations to greatly advance scientific achievements. It wasn't until 1992, however - during the papacy of John Paul II - that church officials publicly acknowledged the mistakes which had been made in the case of Galileo Galilei.

Anticipating that he would one day be vindicated, Galileo wrote a note in his copy of the Dialogue:

Take note, theologians, you run the risk of someday having to condemn as heretics those who would declare, as you do, that the Earth stands still.

Credits:

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John Fraser - the Inquisitor

Alexa Jago - Voice of Maria Celeste

Cornelius Garrett - Voices of the Ambassador and Castelli

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