On this April 12, 1633, chief inquisitor of the Roman Inquisition, appointed by Pope Urban VIII, begins the inquisition of physicist and astronomer Galileo Galilei. Galileo was ordered to turn himself in to the Holy Office to begin trial for holding the belief that the Earth revolves around the Sun, which was deemed heretical by the Catholic Church. Standard practice demanded that the accused be imprisoned and secluded during the trial.

This was the second time that Galileo was in the hot seat for refusing to accept the Church teaching that the Earth was the immovable center of the universe: In 1616, he had been forbidden from holding or defending his beliefs. In the 1633 interrogation, Galileo denied that he "held" belief in the view of Copernicus and only continued to write about the issue and evidence as a means of "discussion" rather than belief. The Church had decided the idea that the Sun moved around the Earth was an absolute fact of scripture that could not be disputed, despite the fact that scientists had known for centuries that the Earth was not the center of the universe.

This time, Galileo’s technical argument didn’t win the day. On June 22, 1633, the Church handed down the following order: "We pronounce, judge, and declare, that you, the said Galileo... have rendered yourself vehemently suspected by this Holy Office of heresy, that is, of having believed and held the doctrine (which is false and contrary to the Holy and Divine Scriptures) that the sun is the center of the world, and that it does not move from east to west, and that the earth does move, and is not the center of the world."

Along with the order came the following penalty: "We order that by a public edict the book of Dialogues of Galileo Galilei be prohibited, and We condemn you to the prison of this Holy Office during Our will and pleasure; and as a salutary penance [to be forgiven of this sin] We enjoin on you that for the space of three years you shall recite once a week the Seven Penitential Psalms."

Galileo agreed not to teach the heresy anymore and spent the rest of his life under house arrest. It took more than 300 years for the Church to admit that Galileo was right and to clear his name of heresy.

1. Why was the Church so angry over Galileo teaching that the sun was the center of the solar system?

2. What was the decision of the Roman Inquisition at Galileo’s trial, and what happened to him after?

3. Why do you think Galileo agreed not to never again teach this “heresy” if he knew it was true?
Correspondence of Galileo and Kepler

[Galileo to Kepler, 1597] ....Like you, I accepted the position of Copernicus several years ago and discovered from thence the causes of many natural effects which are [impossible to explain] by the current theories. I have written up many of my reasons and refutations on the subject, but I have not dared until now to bring them into the open, being warned by the fortunes of Copernicus himself, our master, who procured immortal fame among a few but stepped down among the great crowd (for the foolish are numerous), only to be derided and dishonored. I would dare publish my thoughts if there were many like you; but, since there are not, I shall forebear....

[Kepler to Galileo, 1597] ....I could only have wished that you, who have so profound an insight, would choose another way. You advise us, by your personal example, and in discreetly veiled fashion, to retreat before the general ignorance and not to expose ourselves or [without caution] to oppose the violent attacks of the mob of scholars (and in this you follow Plato and Pythagoras, our true [teachers]). But after a tremendous task has been begun in our time, first by Copernicus and then by many very learned mathematicians, and when the assertion that the Earth moves can no longer be considered something new, would it not be much better to pull the wagon to its goal by our joint efforts, now that we have got it under way, and gradually, with powerful voices, to shout down the common herd, which really does not weigh the arguments very carefully? Thus perhaps by cleverness we may bring it to a knowledge of the truth. With your arguments you would at the same time help your comrades who endure so many unjust judgments, for they would obtain either comfort from your agreement or protection from your influential position. It is not only your Italians who cannot believe that they move if they do not feel it, but we in Germany also do not by any means endear ourselves with this idea. Yet there are ways by which we protect ourselves against these difficulties....

Be of good cheer, Galileo, and come out publicly. If I judge correctly, there are only a few of the distinguished mathematicians of Europe who would part company with us, so great is the power of truth. If Italy seems a less favorable place for your publication, and if you look for difficulties there, perhaps Germany will allow us this freedom.


4. According to Galileo’s letter, how does he say he proved the theory of Copernicus?

5. In Galileo’s letter, why does he say he is nervous to publish his discovery about the heliocentric solar system?

6. What is Kepler urging Galileo to do, and why does he want him to do it?

7. According to Kepler, if Galileo feels he can’t publish freely in Italy, what does he suggest he do?