

Math History for Precalculus

Christiaan Huygens

1. When did Huygens (HIE genz) live?
2. Where was he from?
3. What was his marital status?
4. What was his most famous work and when was it published?

This famous work discussed pendulum clocks. Pendulum motion is periodic and is described using trigonometric functions. The most important mathematical result in this work involves the study of a curve—the cycloid. He discovered a very important property of this curve. In later works he studied other important mathematical curves and their properties. Describe each curve below and explain what Huygens discovered about it.

- | | Curves | Discovery |
|----|----------|-----------|
| 5. | Cycloid | |
| 6. | Catenary | |
| 7. | Cissoid | |
8. Which of the three previous curves are functions?
 9. Huygens wrote on the paraboloid, a surface formed by revolving a parabola about its axis. What did he discover?
 10. Huygens also wrote the first treatise on probability (following the correspondence of Pascal and Fermat). What concept did he contribute to this subject?
 11. Name some of his famous scientific theories.
 12. How did these discoveries result in a move to France? When?
 13. What were Huygens's religious views?
 14. How does his departure from France shed light on his religious convictions?