



By examining the above graph, we find

$$\left. \begin{aligned} x &= at - a \sin t \\ y &= a - a \cos t \end{aligned} \right\}$$

A cycloid is the curve generated by a point on the circumference of a circle which rolls on a straight line in its plane.

## Mathematics

### From the Birth of Numbers

This is one of those hefty references you don't need to own; you just need to know where to find it. It's like an oracle; if you want to know what some obscure mathematical concept or theorem is (What's a Cantor Set?), you go here. The book has wit and humor; you'll need persistence.

—KK



The Conical Helix

The conical helix is a three-dimensional curve formed as if lying on a right circular cone, where it cuts the generators of the surface at a constant angle.

## Mathematics

### From the Birth of Numbers

Jan Gullberg  
1997, 1,093 pages  
\$50  
W.W. Norton



## The Complete Home Learning Source Book

Herein is the richest trove of home schooling and self-educational resources I've seen anywhere. Thousands of textbooks, software, games, journals, and books—all gallantly reviewed and evaluated by a homeschool mom who must never sleep.

—KK

## The Complete Home Learning Source Book

Rebecca Rupp  
1998, 865 pages  
\$30  
Three Rivers Press

**Daily Journals**  
Carol Simpson; Good Year Books, 1993  
Journal-keeping suggestions and activities for kids in grades K-3, with examples of student work.

**Doing the Days: A Year's Worth of Creative Journaling, Drawing, Listening, Reading, Thinking, Arts & Crafts for Children Ages 8-12**  
Lorraine M. Dahlstrom; Free Spirit Publishing, 1994  
Has 366 suggestions for daily journal-writing projects, plus over 1,000 other learning activities lined to the calendar. Suggestions are variously based on celebrations and holidays, famous birthdays, and landmark inventions.  
Also see *Writing Down the Days: 365 Creative Journaling Ideas for Young People* (page 154).

**I'm in the Spotlight**  
A guided journal that encourages writers aged 7-11 to make an autobiographical "journey of discovery." The book is divided into eight sections, to be completed by the young author: "Me, Myself, & I," "Early Memories," "Family Matters," "Friends, Buddies, Pals," "My Favorite Things," "A Rainbow of Feelings," "School Days, School Days," and "Wishes, Hopes, & Dreams."  
\$11.95  
Dream Tree Press  
3836 Thornwood Dr.  
Sacramento, CA 95821  
(800) 769-9029

**The Science Chef Travels Around the World: Fun Food Experiments and Recipes for Kids**  
Joan D'Amico and Karen Eich Drummond; John Wiley & Sons, 1996

The authors tour 14 countries: Mexico, Canada, Brazil, Italy, France, Spain, Germany, Israel, China, Japan, India, Thailand, Morocco, and Ghana. For each there's a science experiment based on a typical ethnic food or food ingredient—for example, readers study viscosity with honey (Egypt) and osmosis with pickled cucumbers (France)—along with a recipe for a complete ethnic meal.  
Also see *The Math Chef* (page 819) and *The Science Chef* (above).

**Science Experiments You Can Eat**  
Vicki Cobb; HarperCrest, 1994  
Irresistible recipes paired with interesting explanations of science principles. For example, kids make rock candy, grape jelly, caramel, and popcorn while learning about crystallization, polymerization, and steam pressure. Also see *More Science Experiments You Can Eat* (1994).

## Great Courses on Tape

The concept is exquisite. Scour the world for the best professors and record their lectures. Paying customers get world-class university courses, at less than world-class university prices, while attending the class at their convenience. The one course I audited this way (while driving) was Robert Greenberg's celebrated forty-eight lessons on *How to Understand and Listen to Great Music*—and it was absolutely superb. No, it was stellar. More than a music appreciation class, it was a view of western civilization through music. Professionally recorded, lively, insightful, fast-paced, authoritative, and memorable. What more could you want from college on a cassette? The Teaching Company catalog lists an eclectic range of other seminars; I'd love to hear recommendations from others. One caveat: these courses seem expensive for many individuals. But they are a) way cheap for college, and b) way cheap by the tape (most courses are at least forty or so tapes). You can also check your library, which is where I borrow mine from, or form a course club to share costs.

—KK

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## How to Flatter

Sage advice that really works.

- Never offer a compliment and ask a favor at the same time.
- Don't be afraid to flatter people you think already get enough.
- Never give the same compliment to different people.
- Never be candid when a person asks you to be candid.
- Locate a weakness and praise its opposite.

From:  
**You're Too Kind**  
A Brief History of Flattery  
Richard Stengel  
2000, 320 pages  
\$25  
Simon & Schuster