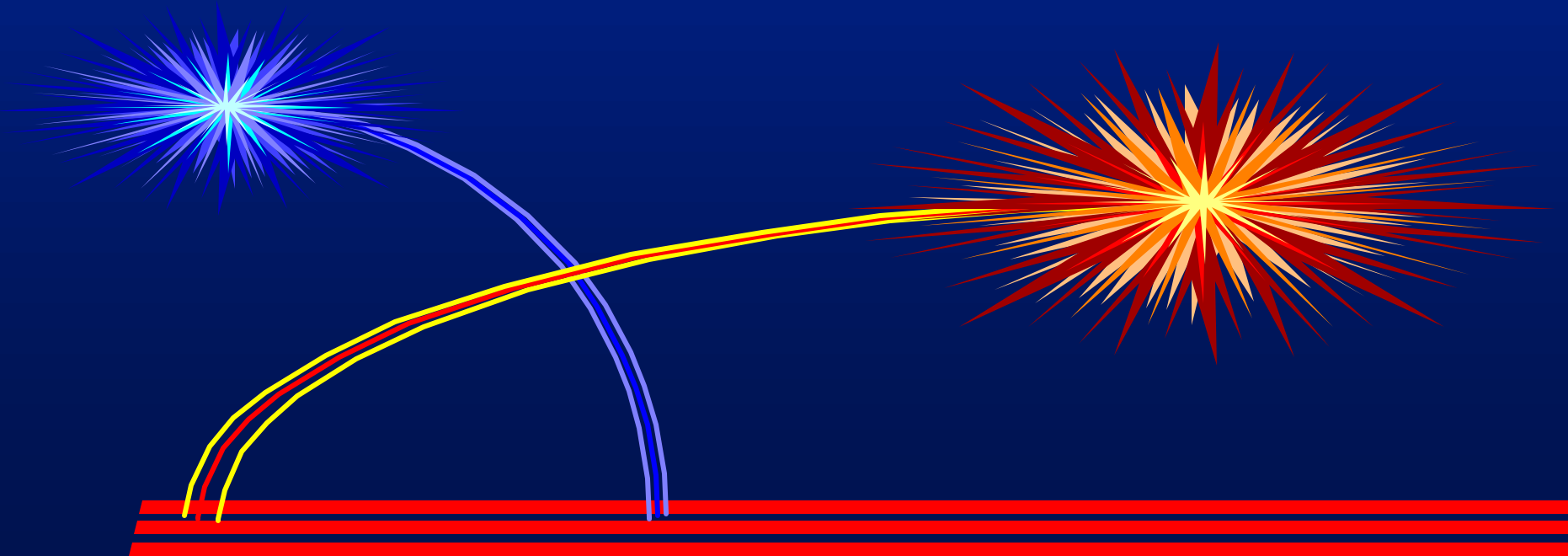




Using the Internet in the Mathematics Classroom!

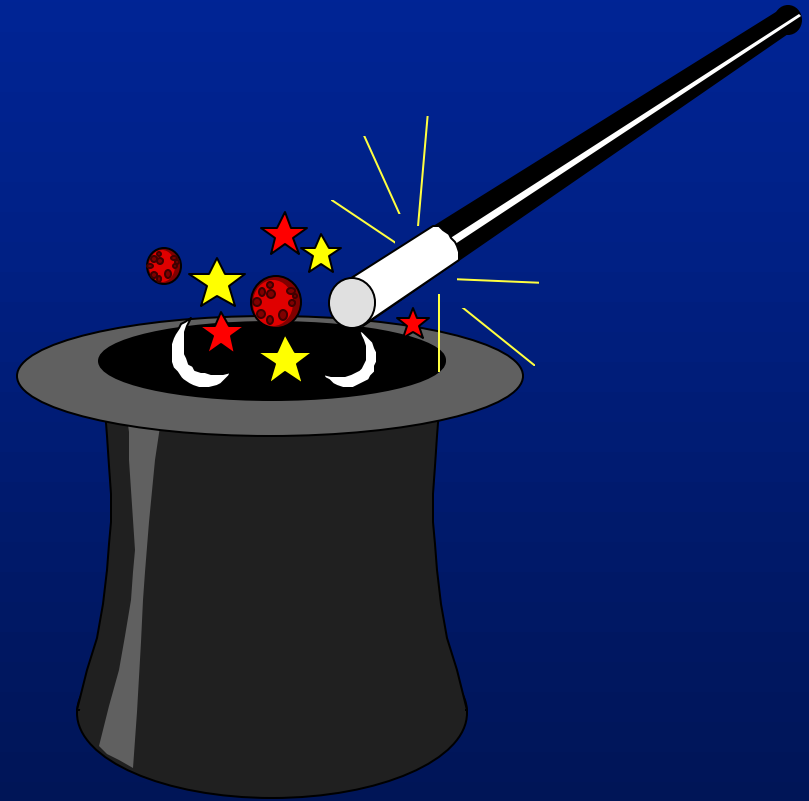
Lauren Jensen

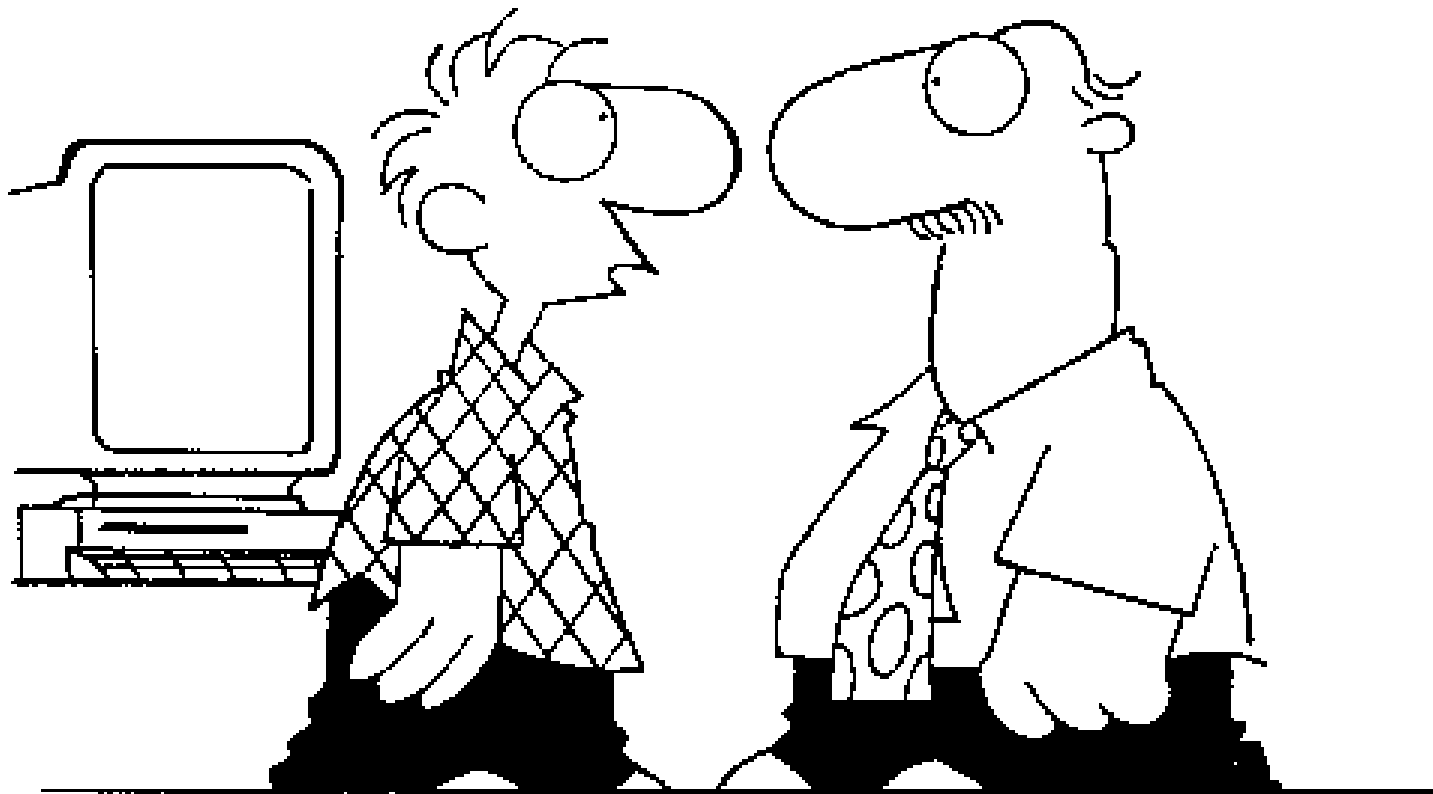
Wisconsin Heights High School





Music, Magic, and the Technology Gods





*I was surfing the Internet ... and ...
well, uhhh, errrrr ... your hard disk
is road kill!*

Tug of War

How to change the way we teach mathematics to integrate technology so students are prepared for an increasingly technological society.



Use of Technology to Investigate and Explore Real World Data

- Modeling
- Predictions: interpolation and extrapolation
- Generalizations
- Comparisons
- Visual representation
- Connections and applications
- Making informed decisions



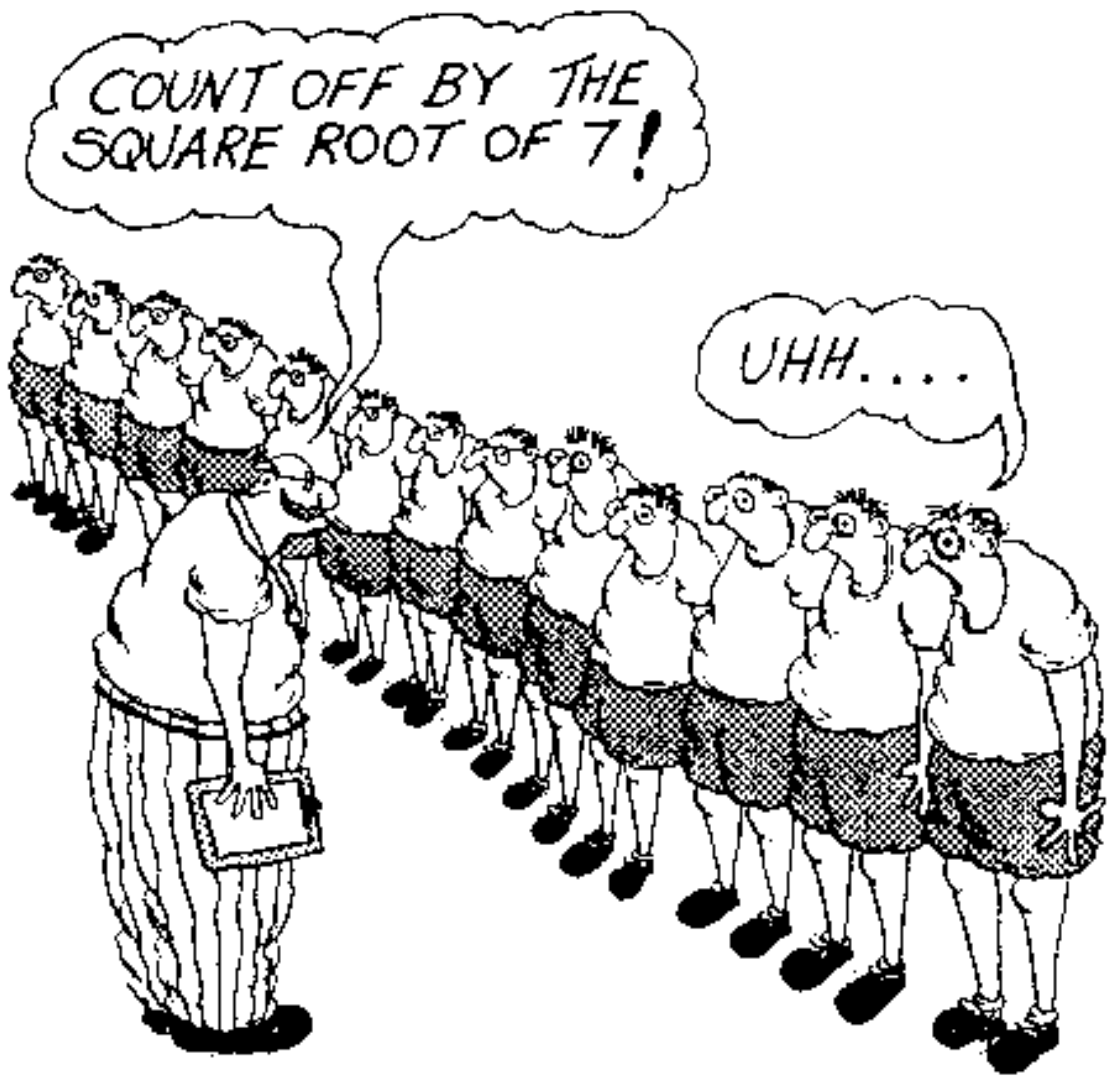


NCTM: Principles and Standards for School Mathematics

The Technology Principle

Technology is essential in teaching and learning mathematics; it influences the mathematics that is taught and enhances students' learning.





COUNT OFF BY THE
SQUARE ROOT OF 7!

UHH....


Deep down inside, Coach Knott had always wanted to be a math teacher.



Wisconsin's Model Academic Standards

“Classroom practice should be geared towards teachers and students actively investigating and discussing mathematical ideas using a variety of tools, materials, and technology.”


“The use of technology must be an integral part of teaching and learning mathematics, (thus) enhancing conceptual understanding and problem-solving skills.”





Standards We Emphasize When Doing Internet Activities


Content Standards:

- » Mathematical Processes
 - » Statistics and Probability
 - » Algebraic Relationships
 - » Data Analysis and
Mathematical Modeling
- 

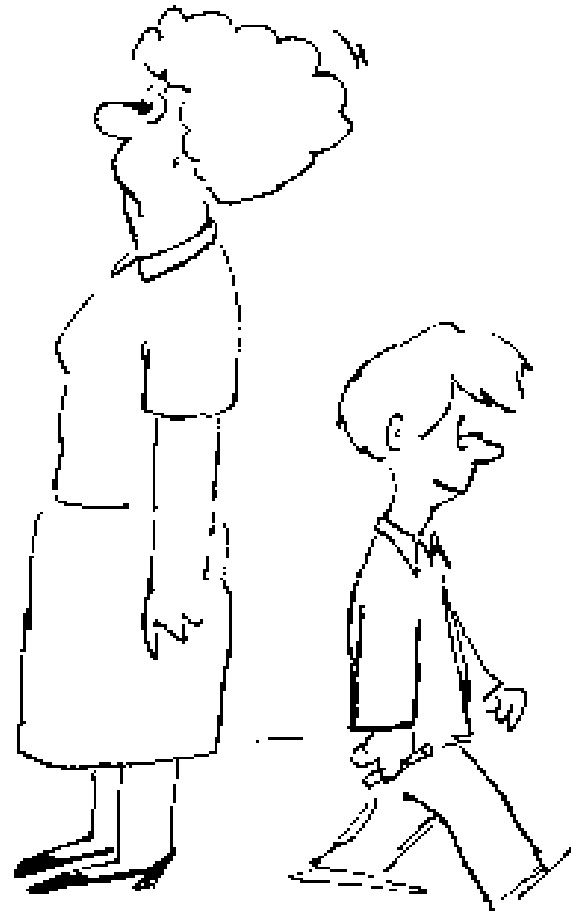


Specific Performance Standards:

Students will:

- » (A.12.4) Develop effective written presentations employing correct mathematical terminology, notation, symbols, and conventions for mathematical arguments and display of data
 - » (A.12.5) Organize work and present mathematical procedures and results clearly, succinctly, and correctly
 - » (E.12.2 and .3) Organize and display data from statistical investigations using line of best fit and measures of correlation
 - » (F.12.2) Use mathematical functions (e.g., linear, exponential, quadratic, power) in a variety of ways
 - » (F.12.4) Model and solve a variety of mathematical and real world problems by using algebraic expressions and equations
- 

WRITE THE
LARGEST NUMBER
YOU CAN:





My first encounter and inspiration with the possibilities of the Internet

- Evan Glazer, Glenbrook South High School who spoke at the NCTM Annual Conference, Minneapolis, 1998
- <http://gbs.glenbrook.k12.il.us/Academics/gbsmat/default.html>



Two approaches to the Internet

- 1) Using the Internet
- 2) Creating your own web pages



Course Information
and Assignments

- ▣ [Math 8](#)
- ▣ [Applied Math](#)
- ▣ [Algebra I](#)
- ▣ [Geomey](#)
- ▣ [Algebra II](#)
- ▣ [Pre-Calculus](#)
- ▣ [Calculus](#)

Student Work

- ▣ [Algebra](#)
- ▣ [Pre-Calculus](#)

Math Links

- ▣ [Geo Problem of the Week](#)
- ▣ [Math Help and Links](#)

Professional
Development

- ▣ [Teacher Resources](#)

- ▣ [Graph Paper](#)



Wisconsin
Heights
Mathematics
Department



W

elcome to the Wisconsin Heights Mathematics
Department Webpage.

Our math program is one of the leaders in the nation
in intergrating technology into our curriculum.

Listed to the left are the links to the site.

The following teachers teach in the math department:

[Ms. Jensen](#)

[Mr. Purdy](#)

[Mrs. Bakken](#)

[Mrs. Koch](#)


[Back to WHHS Home Page](#)

[Back to WHMS 8th Grade Page](#)

Permission has been granted by J.Bass(webmaster) and L.Jensen regarding the use of pictures, quotes, images, backgrounds, and files found on this site. All materials may be used by educator's, parents, and students. Any comments or questions can be directed to the [webmaster](#).



Why I Use the Internet: Goals/ Uses and Philosophy

- Provide information and access to materials for students
 - Community Outreach- Parents
 - Professional Outreach-Teachers
 - Internet as a source of current real world data for mathematical modeling
 - Teach students how to build their own web pages
- 



Provide information and access to materials for students

- Assignment Sheets: Math and Science
- Notes
- Graph paper
- Links for homework help
- Geometry Constructions:

www.constructions.homestead.com



Community Outreach

- Parents download assignment sheets to help their children do their homework
- Parents can see what activities their children are doing
- People check the calendar and sports schedules
- Junior UW-Madison student used our math page for major research project



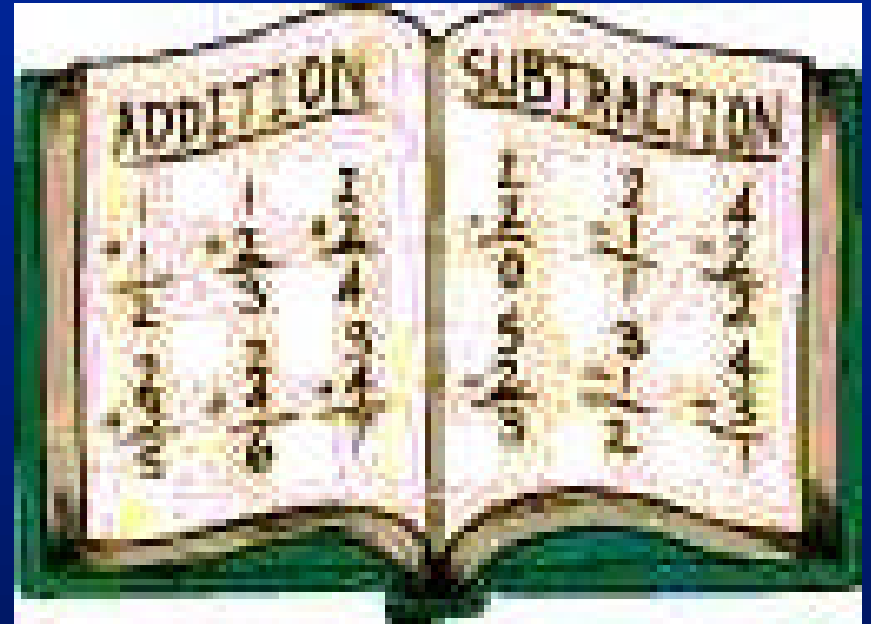
Professional Outreach-Teachers

- Projects and activities are posted for teachers to use
- Provide math links and resources
- Use webpage to show how we use technology in the classroom



Internet as a source of current real world data for mathematical modeling

- The amount of data available is staggering
- The math resource links page provides specific websites to go to...eliminating the time needed to search



- www.k12science.org/realtimproj.html

Teach students how to build their own web pages

- Teacher section has the four main handouts that we use to teach the students how to build web pages
- Phenomenal means for students to communicate mathematics with their own creativity (NCTM *Standards*)



Downsides of the Internet



“My History professor told me to use the Internet for research and it’s been very helpful. I’ve located seventeen people who have offered to sell me a term paper!”

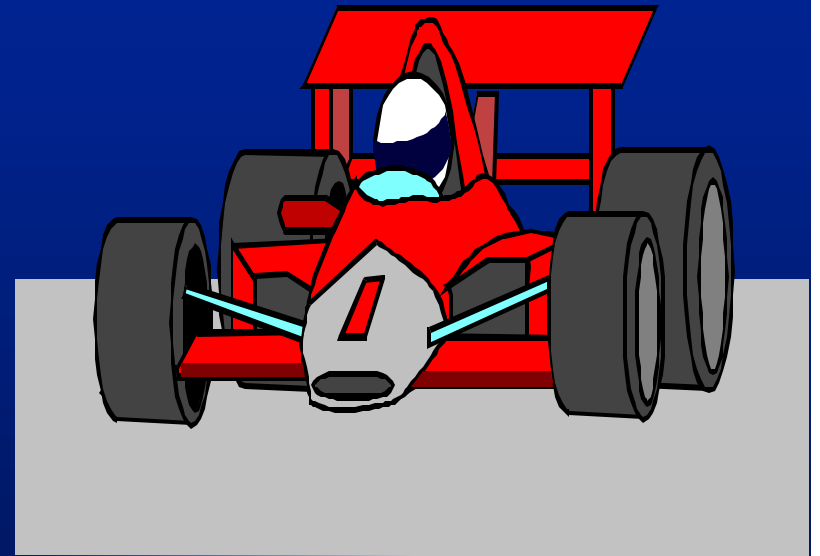
Impact of the internet for me

- Making web pages
 - >Takes more time....
 - >It's a hobby for me
 - >Issue of maintaining web pages versus creating web pages
- Incredible resource for professional and private use



Car Project


- Can be modified for Algebra, Algebra II, and Pre-Calculus
- Students gather the data from the internet
- Excellent data for exponential modeling
- www.edmunds.com/used

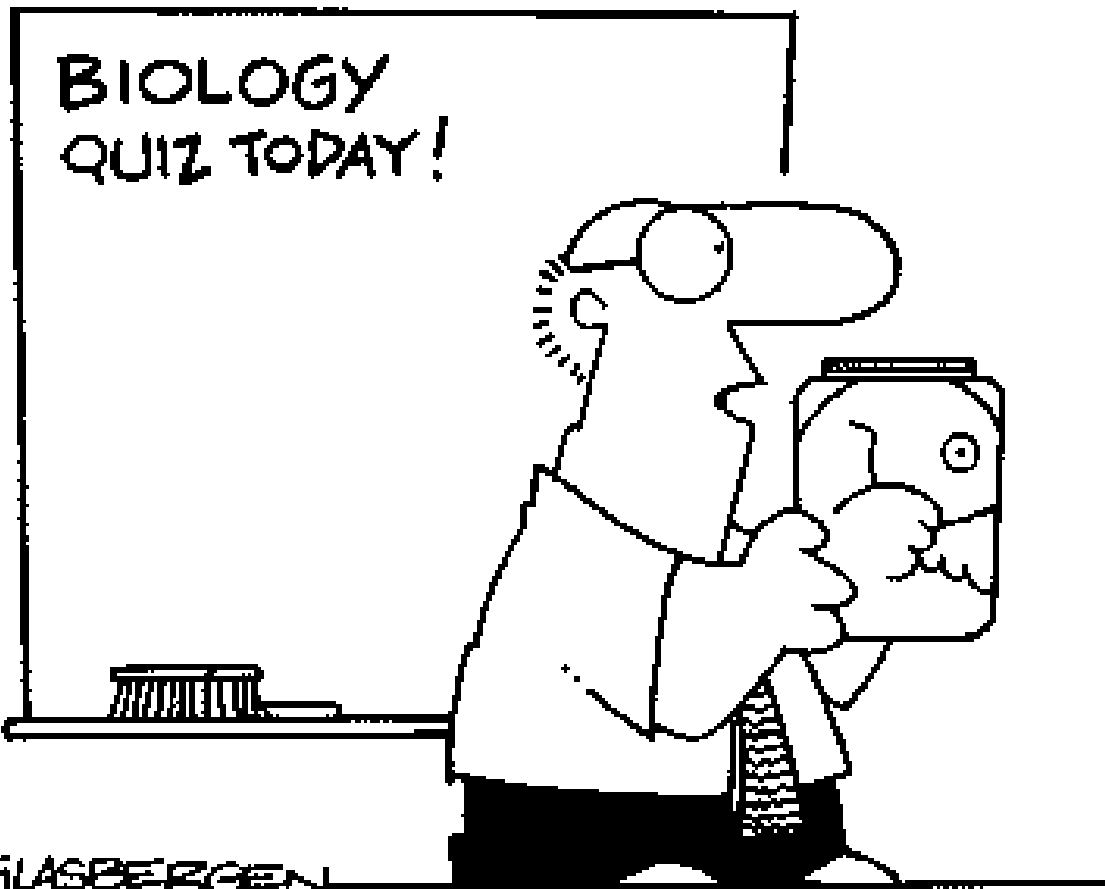




Car Data: Chevrolet Cavalier Z24 Coupe

Year	Trade - In	Private Party	Dealer Retail
1990	\$ 1 2 6 0	\$ 1 7 6 0	\$ 2 3 2 1
1991	\$ 1 6 6 2	\$ 2 1 6 2	\$ 2 9 1 5
1992	\$ 2 1 7 1	\$ 2 6 7 1	\$ 3 4 6 7
1993	\$ 2 5 6 0	\$ 3 0 6 1	\$ 3 8 9 5
1994	\$ 3 6 6 9	\$ 4 2 4 8	\$ 5 2 1 4
1995	\$ 4 4 2 2	\$ 5 0 6 7	\$ 6 1 4 2
1996	\$ 5 6 3 8	\$ 6 3 4 3	\$ 7 5 1 7
1997	\$ 7 0 0 1	\$ 7 6 6 7	\$ 8 7 7 6
1998	\$ 8 4 2 4	\$ 9 2 1 4	\$ 1 0 5 3 0
1999	\$ 9 6 9 1	\$ 1 0 5 4 3	\$ 1 1 9 6 4
2000			\$ 1 6 3 6 5
2001			\$ 1 6 3 6 5





**"Class, who can tell me what I have preserved in this jar?
No, it's not a pig or a baby cow...it's the last student
who got caught cheating on one of my tests!"**

Questions/Comments

??????????

