AST 301

Hand in your list of topics you want covered in this course

If you didn't hand in the "Introductory Astronomy Survey" last time, please do.

Pick up "Memo to Undergraduate Astronomy Students"

If you are new, pick up a syllabus

Syllabus and class notes are on the web:

www.as.utexas.edu/astronomy/education/spring03/lacy

Divide into groups of four

Two from one row of seats and two from the next

Choose a new leader and a new scribe

Put the following objects and distances in order and find their sizes in kilometers to order-of-magnitude accuracy

Astronomical Unit (AU)

Light year (ly)

Observable Universe

Sun

Virgo cluster of galaxies

Earth (diameter)

Milky Way Galaxy

Solar System

U.T. (IH35-Guadalupe)

My list

U.T.	1 km	
Earth	10000 = 10^4 km	
Sun	10^6 km	
A.U.	10^8 km	(distance to Sun)
Solar System	10^{10} km	(100 AU)
light year	10^{13} km	(10^5 AU)
Milky Way Galaxy	10^{18} km	(10^5 ly)
Virgo Cluster	10^{20} km	(10^7 ly)
Observable Universe	10^{23} km	(10^{10} ly)

Scientific Notation

$7^3 = 7x7x7$

$10^3 = 10x10x10 = 1000$

$5x10^2 = 5x10x10 = 500$

$7^{-3} = 1/(7x7x7)$

$10^{-3} = 1/1000 = .001$

$5x10^{-2} = 5/100 = .05$

To add or subtract: make exponents the same then add or subtract the numbers in front

To multiply: add exponents and multiply numbers in front
e.g.: $3x10^2 \times 2x10^{-3} = 3x2 \times 10^{2+(-3)} = 6x10^{-1}$

To divide: subtract exponents and divide numbers in front
e.g.: $4x10^3 / 2x10^1 = 4/2 \times 10^{3-1} = 2x10^2$

Quiz

1. $5x10^2 + 2.5x10^3 = ?$

A. $7.5x10^7$ B. $7.5x10^2$ C. $3x10^2$

D. $3x10^3$ E. I don't know

2. $1.5x10^4 \times 4x10^{-2} = ?$

A. $5.5x10^2$ B. $5.5x10^{-8}$ C. $6x10^2$

D. $6x10^{-8}$ E. $6x10^6$

3. $2x10^3 / 4x10^{-2} = ?$

A. $0.5x10^5$ B. $0.5x10^1$ C. $5x10^4$

D. $-2x10^5$ E. $0.5x10^6$

Assignments for Friday

Read Chapter 2

If it clears up, look for the Moon this evening.
Note where it is in the sky and how it is lit.
Note what stars it is near.

Look again tomorrow or Friday at the same time.
Or see when it gets to where you see it tonight.
Note how it changes in position and appearance.