___23. scoured again

___24. pertaining to looking

___25. pertaining to (things) against rotting

___26. pertaining to being alive

w. heresiarch

x. anabaptist

y. palimpsest

z. psoriasis

Lesson 6

NUMERALS

Many kinds of numbers exist. In Greek, the main groups of numbers are 'cardinal' numbers (1, 2, 3, 4, ...) and 'ordinal' numbers (first, second, third, ...). Other sorts of numbers include fractions, unities (e.g. 'threesome,' ' foursome'), and multiplicatives (e.g. 'twofold,' 'tenfold').

Chemistry uses Greek numbers extensively, both in names for compounds and in crystallography. In fact, many Greek numbers found nowhere else in English occur in chemical terms, but only a few are included in the exercises below.

While these are quite , different from a previous lesson's prefixes, they occur by far most frequently before roots.

Greek Root	**Meaning**	**Examples in English (please fill in at least two examples)**
arithm(e)-	number, to count	
olig-	few	
poly-	many	
ochl-	crowd, mob	
hemi-	half	
hen-	one (among others)	
mon-	one only, alone	
hapl-	single	
prot-	first	
proter-	former, "firster" (an illogical comparative)	

dy-	two	
dipl-	double	
di-	twice	
dich-	in two	
tri-	three	
tetra-	four	
penta-	five	
hexa-	six	
hepta-	seven	
octo-/octa-	eight	
ennea-	nine	
deca-/deka-	ten	
hendeca-	eleven	
dodeca-	twelve	
tris-kai-deka-	thirteen	
icosa-	twenty	
hecaton-/hect-	hundred	
kil-	thousand	
myria-	ten thousand, countless	

Exercises:

1. Why are the 'cardinal' and 'ordinal' numbers so called?

2. Hints for filling in the right-hand column above:

    - Have fun: try to find out-of-the-way derivatives.
    - Feel free to use words in the exercises below!
    - *-ad, -arch(y), -gon, -hedr-,* and *-meter* are often combined with numbers.

3. Look up and differentiate between the following:

    - monotheism
    - polytheism
    - henotheist

- hylozoism
- atheism
- anthropotheism
- autotheism
- bitheism
- ditheism
- dyotheism
- tritheism
- tetratheism
- pantheism
- cosmotheism
- panentheism
- psychotheism
- zootheism

4. Why is there no Greek word for "zero"? Look up the etymologies of the following words:

    - zero
    - cipher
    - algebra
    - average
    - algol
    - algorithm

    - Why do we have "Arabic numerals"?
    - Does Arabic currently use "Arabic numerals"?

5. Identify the etymological elements of *hecatomb*, *polyp*, and *ink*. What is the phenomenon those words share called? Can you think of further examples of it?

6. Investigate the etymologies of the following:

diatom	migraine	monolith
pentathlon	decathlete	octagon
diphycercal	protocol	triglyph
decade	heptahedron	myriapod
pentecost	tesseract	kilogram
hyphen	diatessaron	chiliad
hendiadys	trapeze	deuterium
triskaidekaphobia	adelphic	hectare
hentriacontane	unnilpentium	icosasphere

heneicosane	dean	deuteranopia
triakisoctahedrom	epitrite	hapax
trichotomy	hemiola	dilemma
tetra	tetrapla	proterozoic
penteconter	trireme	protozoic
eicosapentaenoic	docosahexaenoic	alpha-linolenic

7. What's in a name? Find the meaning of the following and say how it developed (these have nothing to do with numbers):

1. huguenot	8. lesbian
3. vulcanize	10. lynch
4. magnet	11. sandwich
5. maudlin	12. gerrymander
6. meander	13. masochist
7. solon	14. draconian

8. What's the difference between a *perissodactylous* animal and an *artiodactylous* animal?

Lesson 7

Colors and Metals

Greek Root	**English meaning**	**Examples** (fill in a few examples for each)
chrom-, chromat-	color	
chro-	color (of skin)	
chlor-	yellowish green	
cirrh-	orange	
cyan-	blue	
erythr-	red	
glauc-	bluish green	
iod-	violet	