The Atoms Family Album

Name _____

In the center of Matterville, there is a place called the Nucleus Arcade, where two members of the Atoms Family like to hang out. Perky Patty Proton, like her sisters, is quite large with a huge smile and eyes that sparkle (+). Patty is always happy and has a very positive personality. Nerdy Nelda Neutron is large like Patty, but she has a boring, flat mouth and eyes with zero expression (o). Her family is very apathetic and neutral about everything. Patty, Nelda, and their sisters spend all their time at the arcade.

Around the Nucleus Arcade, you will find a series of roadways that are used by another member of the Atoms Family, Enraged Elliott Electron. Elliott races madly around the Arcade on his bright red chrome-plated Harley-Davidson. He rides so fast that no one can be sure where he is at any time. Elliott is much smaller than Patty and Nelda and he is always angry because these bigger relatives will not let him in the Arcade. He has a frown on his face, eyes that are squinted with anger, and a very negative (-) attitude.

The first energy street can only hold only two Electron brothers. The second energy street, called the Energy Freeway, can hold 8 brothers. The third energy street, called the Energy Superhighway, can hold 18 of the brothers.

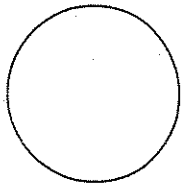
The morale of Matterville is stable as long as each negative Electron brother is balanced out by one positive Proton sister. The number of residents in Matterville depends on the Proton and Neutron families.

Challenge: What would happen to the morale of Matterville if one Elliott Electron was kidnapped?

Name:

Description:

Favorite Activity:



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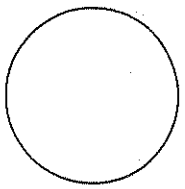
Description:

Favorite Activity:



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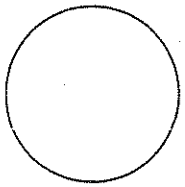
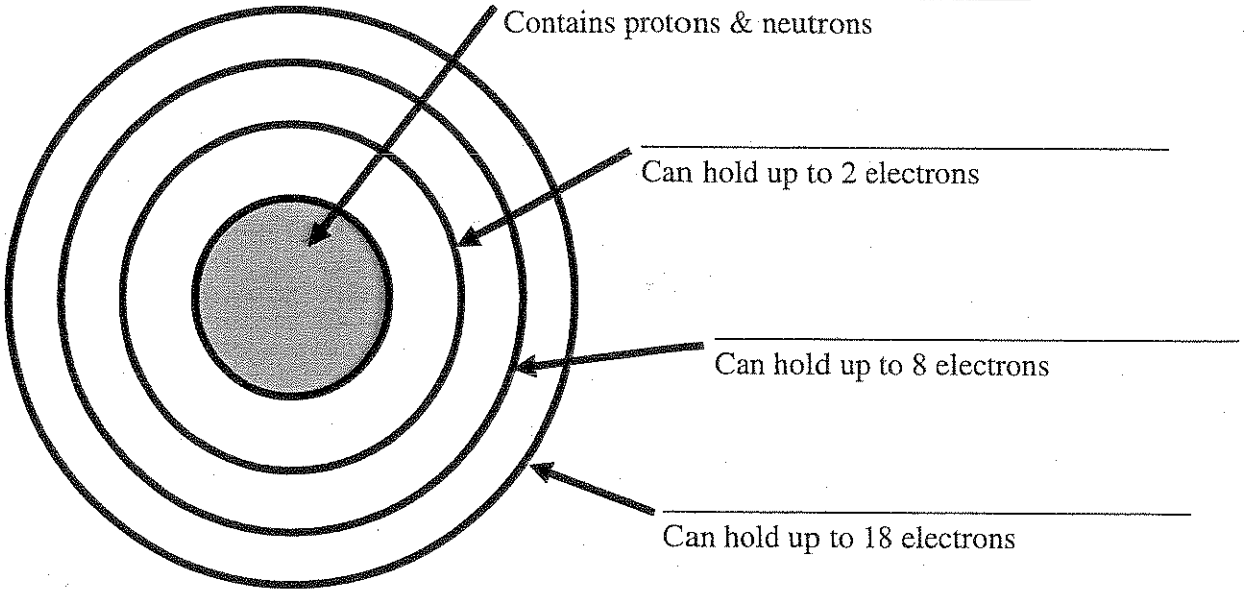


Matterville



The Atoms Family Song

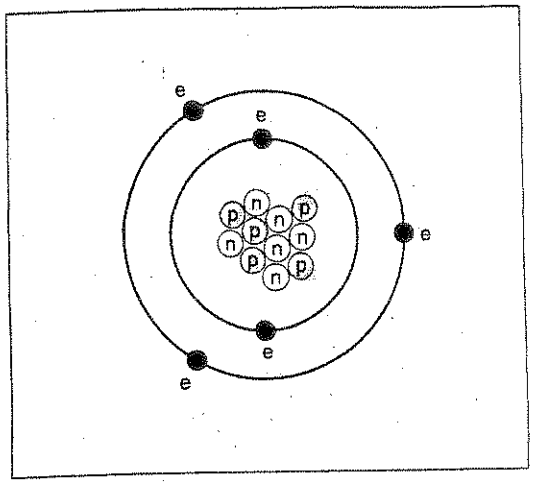
1st Verse:
They're tiny and they're teeny,
Much smaller than a beany,
They never can be seeny,
The Atoms Family.
Chorus

2nd Verse:
Together they make gases,
And liquids like molasses,
And all the solid masses,
The Atoms Family
Chorus

3rd Verse:
Neutrons can be found,
Where protons hang around;
Electrons they surround
The Atoms Family.
Chorus

Chorus:
They are so small.
(Snap, snap)
They're round like a ball.
(Snap, snap)
They make up the air.
They're everywhere.
Can't see them at all.
(Snap, snap)

Created by Kathleen Crawford, 1994



Protons _____

Neutrons _____

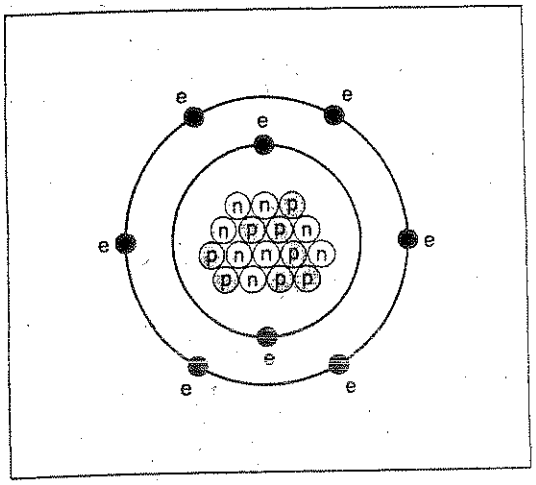
Electrons _____

Positive charge _____

Negative charge _____

Overall charge _____

Figure G *Boron*



Protons _____

Neutrons _____

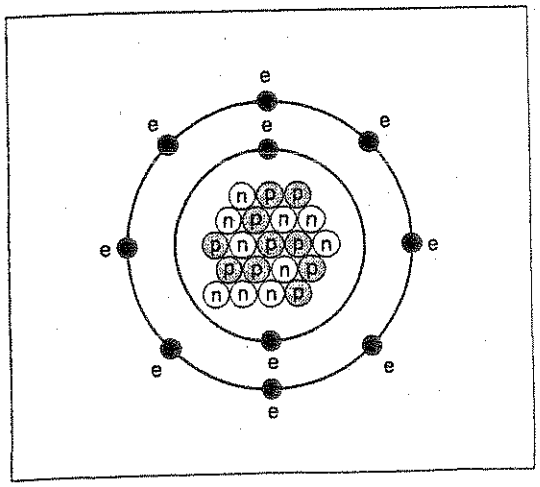
Electrons _____

Positive charge _____

Negative charge _____

Overall charge _____

Figure H *Oxygen*



Protons _____

Neutrons _____

Electrons _____

Positive charge _____

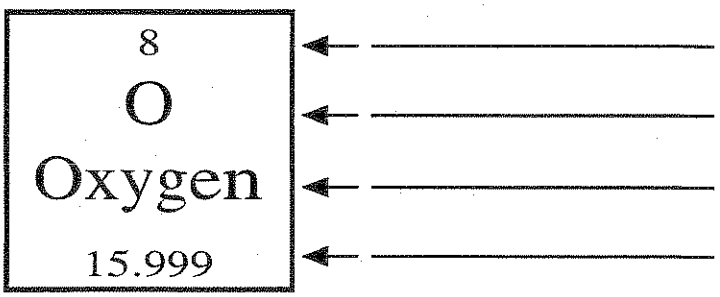
Negative charge _____

Overall charge _____

Figure I *Neon*

The Atoms Family
Atomic Math Challenge

Name _____



Atomic number equals the number of

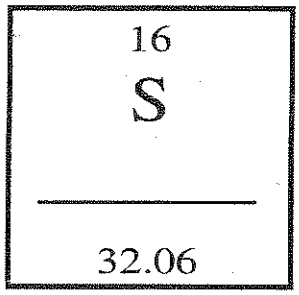
_____ or _____

Atomic mass equals the number of

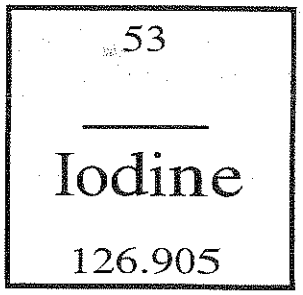
_____ + _____

8 O _____ 15.999	30 ____ Zinc 65.39	3 Li _____ 6.941
Atomic # = _____ Atomic Mass = _____ # of Protons = _____ # of Neutrons = _____ # of Electrons = _____	Atomic # = _____ Atomic Mass = _____ # of Protons = _____ # of Neutrons = _____ # of Electrons = _____	Atomic # = _____ Atomic Mass = _____ # of Protons = _____ # of Neutrons = _____ # of Electrons = _____

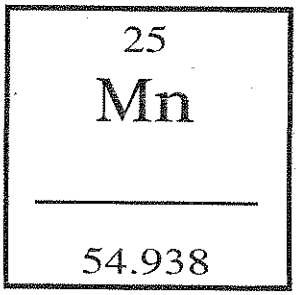
14 ____ Silicon 28.086	5 B _____ 10.81	35 ____ Bromine 79.904
Atomic # = _____ Atomic Mass = _____ # of Protons = _____ # of Neutrons = _____ # of Electrons = _____	Atomic # = _____ Atomic Mass = _____ # of Protons = _____ # of Neutrons = _____ # of Electrons = _____	Atomic # = _____ Atomic Mass = _____ # of Protons = _____ # of Neutrons = _____ # of Electrons = _____



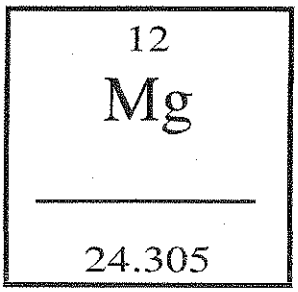
Atomic # = _____
Atomic Mass = _____
# of Protons = _____
# of Neutrons = _____
# of Electrons = _____



Atomic # = _____
Atomic Mass = _____
# of Protons = _____
# of Neutrons = _____
# of Electrons = _____



Atomic # = _____
Atomic Mass = _____
# of Protons = _____
# of Neutrons = _____
# of Electrons = _____



Atomic # = _____
Atomic Mass = _____
# of Protons = _____
# of Neutrons = _____
# of Electrons = _____

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Atomic Mass = _____
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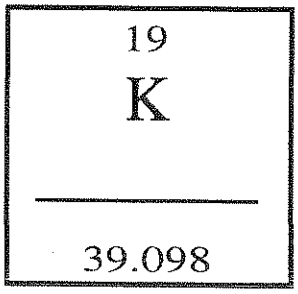

Atomic # = _____
Atomic Mass = _____
# of Protons = _____
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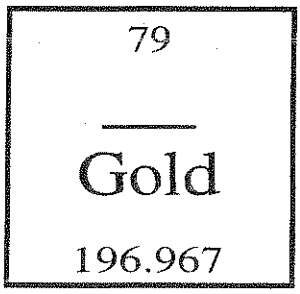
# of Electrons = _____



Atomic # = _____
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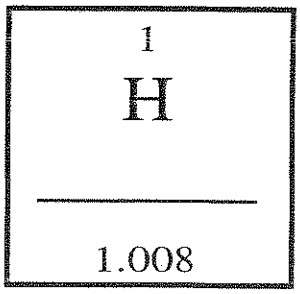

Atomic # = _____
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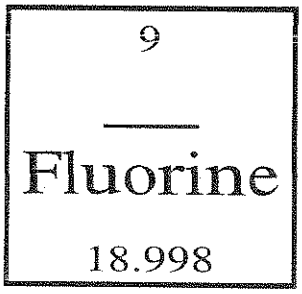

Atomic # = _____
Atomic Mass = _____
# of Protons = _____
# of Neutrons = _____
# of Electrons = _____

COMPLETE THE CHART

Complete the chart by filling in the missing information.

	Kind of Matter	Protons	Neutrons	Atomic Mass	Electrons	Atomic Number
1.	Oxygen	8		16	8	8
2.	Sodium			23	11	
3.	Carbon		6	12		
4.	Phosphorus		16			15
5.	Potassium	19	20			
6.	Iron	26		56		
7.	Copper	29	35	64		
8.	Chlorine			35		17
9.	Boron	5	6			
10.	Aluminum		14	27		

TRUE OR FALSE

In the space provided, write "true" if the sentence is true. Write "false" if the sentence is false.

_____ 1. An atom has no mass.

_____ 2. An electron is the largest part of an atom.

_____ 3. All atoms have the same mass.

_____ 4. All protons have the same mass.

_____ 5. All oxygen atoms have the same mass.

_____ 6. An oxygen atom has the same atomic number as a hydrogen atom.

_____ 7. To find the atomic mass of an atom, we add the protons and electrons.

_____ 8. The atomic number of an atom is the number of neutrons it has.

_____ 9. Atoms of the same kind that have different numbers of neutrons are called isotopes.

_____ 10. Atomic number = atomic mass.