

# Grudge Ball !!!

**Match #2:**  
**Electrons**  
**Periodic Table**

# GRUDGE BALL RULES

**Each team gets 10Xs**

- Teams will take a turn answering a review Q
- Correct answer  
= 2Xs to take from any team (splitting is ok)  
and a shot at the hoop.

**Successful shot from the:**

**2 point line = +2X (4 total)**

**3 point line = +3X (5 total)**

# GRUDGE BALL RULES

## No More Xs?

**Gain back 2Xs by answering the Q correctly.**

## Incorrect Answer?

**If team gets incorrect answer, random choice gets to steal the Q, so BE READY!**

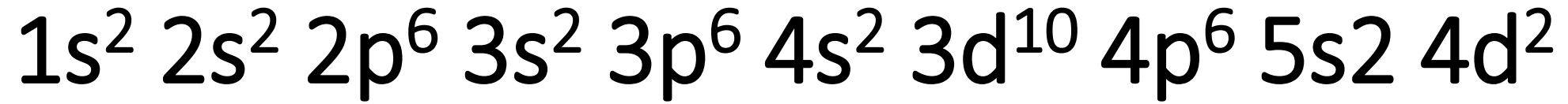
## Winning

**Most Xs at the end of game wins!**

Which element is this?

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^5$

Give name and write out noble gas notation:



# What does the Pauli Exclusion Principle say?

# What does the Aufbau Principle say?

Draw the orbital diagram for carbon.  
How many unpaired e- does it have?

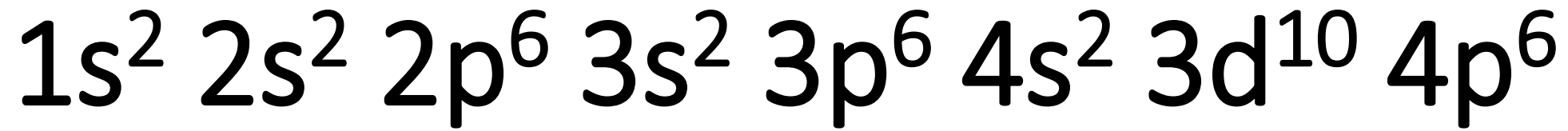


# What is the noble gas configuration for calcium?

How many unpaired electrons  
are in chromium?

How many orbitals in a set of each  
type/shape orbital?

What is the highest energy level in the element below:



Which element might form a ion by  
losing electrons from the s and d  
orbitals F, S, Li, Ti

# What is the atomic radius?

**Atomic radius increases as you go (left or right?) and (up or down?)**

Atomic radius decreases going right because  
\_\_\_\_\_ and increases going down  
because \_\_\_\_\_



Order these elements  
from smallest to largest?

Se, S, Cl Na

Of the elements in the alkaline earth metals which has the highest electronegativity

Why does it take less energy to remove  
e- as you go down a group?

Describe the trend for reactivity of halogens.

What is the sum of the charges from the atoms below when they are ions?  
Calcium, nitrogen, and strontium

How many electrons are in a  
set of p orbitals?

What is the term for the ability of metals to be pounded and shaped into sheets?

# What is the definition of ionization energy?



Predict the ions of the following atoms and then  
rank the ions  
from smallest to largest radius  
S , P , Cl , Ca , K

Electronegativity increases  
going (left or right?) and increases  
going (up or down?)

Which element is in period 4  
group 3B

Draw a diagram for absorption  
and emission.

What is the e- configuration for  
copper (II)?

How many electrons can fit  
in a d orbital?

Electronegativity  
(increases or decreases?) as you move  
down a group.  
WHY?

Does Metallic Character (reactivity) increase or decrease going down a group?



Define “effective nuclear charge.”

Give an example of two ions that each have a larger atomic radius than their neutral parent atom.