

For each pair, predict the type of bond (ionic or covalent), calculate the electronegativity difference (subtract!), and confirm the type of bond (ionic or covalent).

	<u>Pair</u>	<u>Prediction?</u>	<u>Electronegativity Difference</u>	<u>Bond Type</u>
(a)	Sn-N	_____	_____	_____
(b)	Y-F	_____	_____	_____
(c)	Al-H	_____	_____	_____
(d)	Ca-O	_____	_____	_____
(e)	Li-P	_____	_____	_____
(f)	Cl-P	_____	_____	_____
(g)	N-C	_____	_____	_____
(h)	Mg-S	_____	_____	_____
(i)	F-F	_____	_____	_____
(j)	Fe-F	_____	_____	_____
(k)	Ag-Cl	_____	_____	_____
(l)	F-Al	_____	_____	_____
(m)	H-Li	_____	_____	_____
(n)	Au-N	_____	_____	_____
(o)	O-Ag	_____	_____	_____
(p)	K-F	_____	_____	_____
(q)	P-Ca	_____	_____	_____
(r)	Fr-H	_____	_____	_____
(s)	C-H	_____	_____	_____
(t)	Ba-O	_____	_____	_____
(u)	S-Na	_____	_____	_____
(v)	Sr-Cu	_____	_____	_____
(w)	Na-Cl	_____	_____	_____
(x)	Cu-O	_____	_____	_____

## Chapters 10 & 12 Quiz Mini-Review:

Ions to review:  $\text{H}^+$   $\text{Li}^+$   $\text{Ag}^+$   $\text{K}^+$   $\text{Na}^+$  (know name, symbol, charge)

Vocabulary to review:

cation	negative	atomic radius	oxidation number
anion	positive	ion	first ionization energy

Sample questions to try (remember, you can check most of your answers using your book!):

- Using only a periodic table, predict whether an atom of fluorine or iodine would be larger. Give a reason for your prediction.
- Using only a periodic table, predict whether the atom Ag or the ion  $\text{Ag}^+$  would be larger. Give a reason for your prediction.
- Using only a periodic table, predict the oxidation number for calcium. Write out calcium's noble gas electron configuration shorthand to help explain your prediction.
- Three of manganese's possible oxidation numbers are 2+, 3+, and 7+.
  - Why does manganese have more than one oxidation number (while sodium, for example, only has one)? Explain your answer.
  - Use manganese's noble gas electron configuration shorthand to explain how manganese forms each of these three oxidation numbers.
  - Predict which of the three oxidation numbers would be the most stable. Give a reason for your prediction.
- Using only a periodic table, predict whether magnesium or chlorine would have a higher first ionization energy. Give a reason for your prediction.