

Name : _____ Date : _____

Periodic Trends

Use the periodic table and your knowledge of the periodic trends to answer the following questions.

1 Identify each element as metal, nonmetal, and metalloid

- (a) Chromium _____ (b) Chlorine _____
(c) Palladium _____ (d) Antimony _____
(e) Iodine _____ (f) Arsenic _____

2 Give two examples for each category

- (a) Alkali metal _____
(b) Alkaline earth metal _____
(c) Transition metal _____
(d) Post-transition metal _____
(e) Metalloid _____
(f) Nonmetal _____

3 Circle the atom in each pair with the largest atomic radius.

- (a) Ga Al (b) N P (c) Te Se (d) Na Cl
(e) S K (f) Li Br (g) Pb Ca (h) Pt F

4 Circle the ion in each pair with the greater ionization energy.

- (a) Be Li (b) K Na (c) Cl Si (d) Ba Ca
(e) Ar P (f) K Li (g) Ge Br (h) Zn Cs

5 Circle the atom in each pair with greater electronegativity.

- (a) Ga Ca (b) O Li (c) S Cl (d) As Br
(e) Sr Ba (f) S O (g) Sr I (h) Kr Si

6 Circle the atom in each pair with greater electronegativity.

- (a) Atomic radius _____ (b) First ionization energy _____
(c) Electronegativity _____

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Answers

1 Identify each element as metal, nonmetal, and metalloid

- (a) Chromium Metal (b) Chlorine Nonmetal
(c) Palladium Metal (d) Antimony Metalloid
(e) Iodine Nonmetal (f) Arsenic Metalloid

2 Give two examples for each category

- (a) Alkali metal Sodium and potassium
(b) Alkaline earth metal Magnesium and Calcium
(c) Transition metal Iron and Cobalt
(d) Post-transition metal Aluminum and Tin
(e) Metalloid Silicon and Germanium
(f) Nonmetal Phosphorous and Sulfur

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5 Circle the atom in each pair with greater electronegativity.

- (a) Ga Ca (b) O Li (c) S Cl (d) As Br
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6 Circle the atom in each pair with greater electronegativity.

- (a) Atomic radius Increases (b) First ionization energy Decreases
(c) Electronegativity Decreases