

Chapter 6 — Problem Set 1

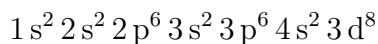
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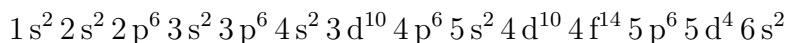
November 12, 2020

1. Write the electron configuration for the following:

(a) Nickel



(b) Tungsten



(c) Oxygen

(d) Lead

2. Write the box diagram for the following:

(a) Fluorine

(b) Vanadium

(c) Bismuth

(d) Silver

3. Give the four quantum numbers for the second to last electron in the following:

(a) Calcium

(b) Iodine

(c) Tin

(d) Carbon

(e) Radon

(f) Gallium

4. State how many electrons are in the following:

- (a) f orbital
- (b) d sublevel
- (c) All sublevels where $n = 3$
- (d) All sublevels where $n = 5$
- (e) $l = 2$
- (f) $l = 0$

5. State the number of unpaired electrons in:

- (a) Iron
- (b) Arsenic
- (c) Tin
- (d) Silver

6. State what atom's electron configuration ends with the following:

- (a) $3d^3$
- (b) $4p^2$
- (c) $4f^7$
- (d) $5s^1$
- (e) $6s^2$
- (f) $5d^8$