

PYear 12 Chemistry
Quick Quiz: Elemental Chemistry

1. Write the electron configuration for copper.



2. Explain why an oxidation state of +7 is possible for bromine.

It may share all its $4s^2$ and $4p^5$ electrons with a more electronegative element

3. Write the likely covalences for the following elements:

(a) fluorine 1

(b) sulfur 2, 4, 6

4. Write an equation for the reaction of PbO_2 with HCl.



5. Write an equation to show how an oxide of nitrogen could display acidic characteristics.



6. State which of the following would react with SiO_2 : sodium hydroxide, water, sulfuric acid

only sodium hydroxide

7. For the following molecules, write the oxidation state of each element:

(a) P_4O_{10}

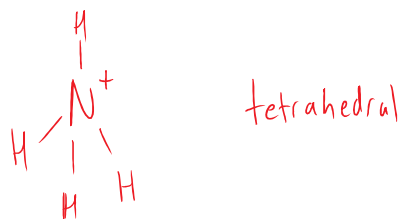
(b) SO_4^{2-}

P: +5 O: -2

S: +6 O: -2

8.

(a) Draw the NH_4^+ molecule. Name the shape.



(b) State what causes the N-H bonds in NH_4^+ to be polar.

The difference in electronegativity between N and H.

(c) State why a molecule of NH_4^+ is non-polar.

The bond dipoles do not share a common direction (they cancel out).