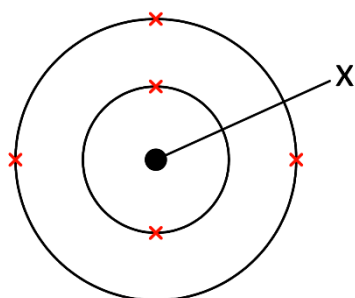


Name:

Class:



Complete the figure to show the electronic structure of a boron atom.



Accept dots instead of crosses. Accept any correct arrangement of 2 in the 1st shell and 3 in the 2nd.

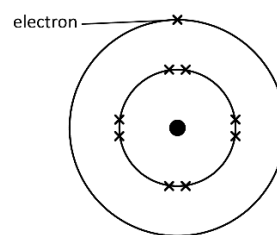
What does the central part labelled X represent in the figure above represent?

The nucleus

What is the mass and charge of a neutron?

Mass = 1 Charge = 0

The electronic structure of a neon atom shown in the figure below is not correct.

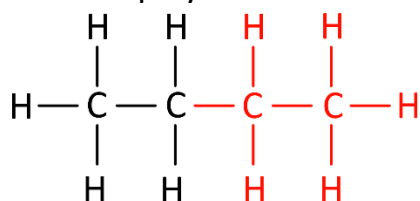


Explain two things that are wrong with the electronic structure shown.

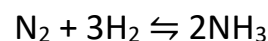
Any **two** of the following:

- There are too many electrons in the first energy level or inner shell.
- There are too few electrons in the second energy level or outer shell.
- Neon does not have 9 electrons or neon has 10 electrons.

Complete the displayed structure of butane.



The equation for a reaction is:



The forward reaction is exothermic, so the reverse reaction is:

Endothermic

Calculate the percentage by mass of nitrogen in ammonia, NH_3 .

$$14 \div 17 = 0.8235 \times 100 = 82.4\%$$

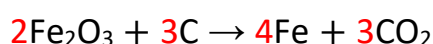
State the formula of a hydroxide ion.

OH^-

State the formula of a sulfate ion.

SO_4^{2-}

Complete and balance the equation for a reaction to produce iron from iron oxide.



In what states will ionic compounds conduct electricity?

molten and aqueous

How do ionic compounds conduct electricity?

When the compound is molten or aqueous the ions are able to move and carry charge.

Explain why CO_2 has a low melting point.

There are weak intermolecular forces that need little energy to overcome.

Give the half equation for the formation of sodium metal at a cathode.

