How can you tell the difference between an atom and an ion based on knowing the number of protons, neutrons, and electrons in each? Be brief.

**Full credit:**
An atom has an equal number of protons and electrons – an ion does not.

**Let’s look at how we can improve these:**

An atom has the same number of protons as electrons, an ion is a charged subatomic particle

If there are more or less electrons than there are protons we can find out if it is a neutral atom or a positively or negatively charged ion.

When atoms add or loses, that’s the ion.

Addition or subtraction of electrons will lead to an ion or if you see it written as element X⁺ or X⁻ indicates it’s an ion of the elemental form.

An atom and an ion of an element have the same number of protons and neutrons, but difference from the number of electrons.

An atom is usually neutral. An ion is usually charged (positive or negative).

If the electrons have a different amount than the protons, then an ion would occur with a sign such as -, +, 2+, 2-, etc…

**TIPS to short answer questions/explanations:**

Your answers do not have to be long, but they must answer the question in a clear and concise manner!

Check your response to make sure it says what you want it to say. Make sure it will be interpreted correctly.