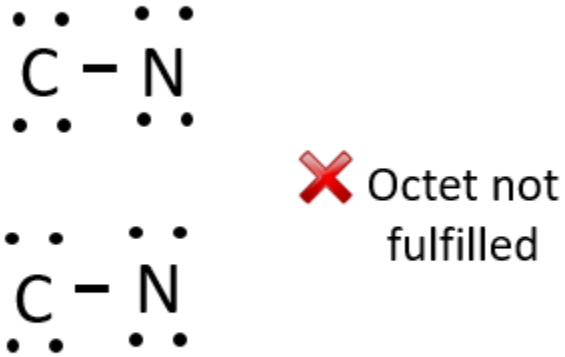
Consider the outcome if the Lewis structure was drawn with a single bond, and the octet rule was fulfilled. The total number of electrons would be 14. In step 1, we determined that the ion has 10 valence electrons, so we know that the Lewis structure below is incorrect, even though the octet rule is fulfilled.

Consider the outcome if the Lewis structure was drawn with the correct number of total valence electrons and a single bond. The Lewis structures below are both incorrect because, although 10 electrons are present in both structures, the octet rule is not fulfilled.



Consider the outcome if the Lewis structure was drawn with a double bond and the octet rule was fulfilled. The Lewis structure below is incorrect because, yet again, the number of valence electrons is incorrect. The total number of electrons in the structure below is 12, and it was determined that the molecule has 10 valence electrons.

The correct Lewis structure has a triple bond; carbon has one lone pair, and nitrogen has one lone pair. The octet rule is fulfilled, and the valence electrons total 10, as calculated in step 1.