

Skill CH.3: I can recognize how the particles in an element, molecule, compound, and mixture are different.

True or False. For any statements you believe are false, change the words in the statement that would make it true.

- F 1. Oxygen ( $O_2$ ) is a ~~mixture~~ <sup>molecule</sup>.
- F 2. Air is a ~~molecule~~ <sup>mixture</sup>.
- T 3. An element is made out of only one kind of atom.
- T 4. The atoms in an element are not bonded together. <sup>(pure)</sup>
- F 5. The atoms in a molecule are ~~not~~ bonded together. elements  
or  
atoms
- F 6. When looking at drawings of a molecule, the "spheres" often represent ~~molecules~~ <sup>atoms</sup> and lines or sticks represent the bonds connecting them.
- T 7. A molecule could be made of the same atoms or different atoms that are bonded together.
- F 8. Ozone ( $O_3$ ) is made of three oxygen atoms and is a ~~compound~~ <sup>molecule</sup>.
- T 9. Water, salt and carbon dioxide are molecules.
- T 10. Water, salt, and carbon dioxide are all compounds.
- F 11. NaCl is made out of ~~four~~ <sup>two</sup> different kinds of atoms.
- T 12.  $H_2O_2$  is made up of 2 hydrogen atoms and 2 oxygen atoms.
- T 13. Ammonia ( $NH_3$ ) is a compound.
- T 14. A water molecule is in the shape of a triangle.
- F 15. A carbon dioxide molecule is made up of ~~single~~ <sup>double</sup> bonds.

- T 16. Bonds are formed when the electrons in the outer shell are shared or transferred.
- T 17. Atoms are the building blocks of elements, molecules, compounds, and mixtures.
- T 18. Sodium Chloride, or table salt, is a compound.
- T 19. Air is a mixture of many different gas molecules.
- T 20. Pizza is a heterogeneous mixture.
- F 21. Salt water is a ~~heterogeneous~~ <sup>homogeneous</sup> mixture.
- T 22. A solution is when one substance dissolves in another.
- F 23. In Kool Aid, water is the ~~solute~~ <sup>solvent</sup>.
- T 24. In Kool Aid, the sugar is the solute.
- F 25. Another word for ~~air~~ <sup>O<sub>2</sub></sup> is oxygen.
- T 26. Often when you look at the drawing of a compound, you will notice that there are different colored "spheres" bonded together.
- T 27. Tap water has many things dissolved in water. This means that tap water is a homogeneous mixture.
- T 28. Solutions are homogeneous mixtures.
- T 29. Pure water (H<sub>2</sub>O) is a compound and a molecule.