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| Question 1  Rusting is an example of a:   1. Chemical Change 2. Chemical Property 3. Physical Change 4. Physical Property | Question 2  Name 4 signs of a Chemical Reaction that we have discussed or seen |
| Question 3  What TYPE of reaction is this?  **N2 + 3H2 🡪 2NH3** | Question 4  What TYPE of reaction is this?  **2NaCl 🡪 2Na + Cl2** |
| Question 5  What TYPE of reaction is this?  **Na2S + 2HCl 🡪 2NaCl + H2S** | Question 6  What TYPE of reaction is this?  **2HCl + Zn 🡪 ZnCl2 + H2** |
| Question 7  **The density of gold is 19g/mL**  This is an example of a:   1. Physical Change 2. Physical Property 3. Chemical Change 4. Chemical Property | Question 8  **The water evaporated to steam**  This is an example of a:   1. Physical Change 2. Physical Property 3. Chemical Change 4. Chemical Property |
| Answer 2   * Change in temperature * Change in smell/odor * Change in pH * Change in color * Gas produced (Bubbles/fizzing) * Precipitate formed * Light or electricity produced | Answer 1  Chemical Change  (it is an action that has made a new substance) |
| Answer 4  Decomposition | Answer 3  Synthesis |
| Answer 6  Single Replacement  (Single Displacement) | Answer 5  Double Replacement  (Double Displacement) |
| Answer 8  Physical Change | Answer 7  Physical Property |
| Question 9  **The ethanol is flammable**  This is an example of a:   1. Physical Change 2. Physical Property 3. Chemical Change 4. Chemical Property | Question 10  **The freezing point of water is 0oC**  This is an example of a:   1. Physical Change 2. Physical Property 3. Chemical Change 4. Chemical Property |
| Question 11  An unknown substance tastes sour and has a low pH. Is this substance an acid, base, or neutral? | Question 12  What would you need to add in order to neutralize a weak base?   1. A strong base 2. A weak base 3. An acid 4. A neutral substance |
| Question 13  An unknown substance feels slippery and has a high pH. Is this substance an acid, base, or neutral? | Question 14  What pH level is considered neutral? |
| Question 15  What is the formula for calculating density? | Question 16   1. What is the density of an object that has a mass of 15 g and a volume of 5 cm3? 2. Would this substance sink or float in water? |
| Answer 10  Physical Property | Answer 9  Chemical Property |
| Answer 12  c. An acid | Answer 11  An acid |
| Answer 14  pH of 7 is neutral | Answer 13  A base |
| Answer 16   1. The density would be 3 g/cm3 2. This object would sink since its density is greater than 1 | Answer 15  Density = mass ÷ volume  (or mass/volume) |
| Question 17  A reaction in which a system absorbs energy from its surroundings and would feel colder is called a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ reaction. | Question 18  A solid that forms and settles out of a liquid mixture during a chemical reaction is called a(n)  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Question 19  A change in a substance that does NOT cause it to change into a new substance or change many of its properties | Question 20  A property of a substance that COULD permanently change the identity of the substance |
| Question 21  A description of a substance that can be observed without changing the identity of the substance | Question 22  A measurement of how close or compact the particles are in a substance |
| Question 23  What are 2 ways to increase the rate of a reaction? | Question 24  You have 2 blocks of aluminum, one is large and one is small. How would their densities compare?   1. The small one has the highest density 2. The large one has the highest density 3. Both would have the same density 4. There is no way to know without measuring them |
| Answer 18  Precipitate | Answer 17  Endothermic |
| Answer 20  Chemical Property | Answer 19  Physical change |
| Answer 22  Density | Answer 21  Physical Property |
| Answer 24  Their densities would be the same since they are both made of the same substance (aluminum) | Answer 23   1. Increase temperature 2. Increase surface area 3. Stir or increase motion of particles 4. Increase concentration |
| Question 25  Use the following terms to complete the sentences: **hydroxide, hydronium**  Acids produce excess \_\_\_\_\_\_\_\_\_\_\_ions  Bases produce excess \_\_\_\_\_\_\_\_\_\_\_ions | Question 26  What range of numbers on a pH scale would indicate a substance is an ACID? |
| Question 27  What TYPE of reaction is this?  **C2H4  + 3O2  → 2CO2  + 2H2O** | Question 28  What TYPE of reaction is this?  **FeSO4  + Cu 🡪 CuSO4 + Fe** |
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| Answer 26  Acids = pH less than 7 | Answer 25  Acids produce excess h**ydronium** ions  Bases produce excess **hydroxide** ions |
| Answer 28  Single Replacement | Answer 27  Combustion |