Predict which of the following has an ionic bond (refer to periodic table)

There are many types of chemical bonds and forces that unite molecules. The two most basic types of titles are characterized as ionic or covalent. In the ionic bond, atoms transfer electrons to each other. Ionic bonds require at least one electron donor and one electron receptor. In contrast, atoms with the same electronegativity share electrons in covalent bonds, because no atom preferentially attracts or repulses shared electrons. The ionic bond is the complete transfer of valence electrons between atoms. It is a type of chemical bond that generates two ions loaded in the opposite way. In ionic bonds, the metal loses electrons to become a positively charged ceoto, while the non-metallic accepts these electrons to become a negatively charged anion. Ionic bonds require an electron donor, often a metal, and an electron receptor, a non-metallic one. Ionic bonding is observed because metals have few electrons in their outermost orbitals. By losing these electrons, these metals can reach the noble gas configuration and satisfy the octet rule. Similarly, non-migrants who have about 8 electrons in their valence shells tend to easily accept electrons to achieve noble gas configuration. In ionic bonding, more than 1 electron can be given or received to satisfy the octet rule. The charges on the anion and cation correspond to the number of electrons given or received. In ionic bonds, the net load of the compound must be zero. This sodium molecule donor solitary electron in its valence orbital in order to achieve the octet configuration. This creates a positively charged cation due to the loss of electrons. This chlorine atom receives an electron to achieve its octet configuration, which creates a negatively charged anion. The predicted global energy of the ionic bonding process, which includes the ionization energy of metallic and electronic affinity of the non-metallic, is generally positive, indicating that the reaction is endothermic and unfavorable. However, this reaction is highly favorable due to electrostatic attraction between particles. At the ideal interatomic distance, the attraction between these particles releases enough energy to facilitate the reaction. Most ionic compounds tend to dissociate into polar solvents because they are often polar. This phenomenon is due to the opposite charges in each ion. Example \(\PageIndex{1}\): Chloride salts In this example, the sodium atom is donating its 1-valence electron to the chlorine atom. This creates a sodium casing and a chlorine anion. Note that the net load of the resulting compound is 0. In this example, the magnesium atom is donating both of its valence electrons to chlorine atoms. Each chlorine atom can only accept 1 electron before its noble gas configuration; therefore, 2 chlorine atoms are needed to accept the 2 electrons given by magnesium. Warning Notice the net load of the compound is 0. Covalent bonding is the sharing of electrons between atoms. This type of binding occurs between two atoms of the same element or elements close to each other in the periodic table. This connection occurs mainly among non-migrants; however, it can also be observed between non-metallic and metals. If atoms have similar electronegativities (the same affinity with electrons), covalent bonds are more likely to occur. Because both atoms have the same affinity with electrons and do not even tend to give them away, they share electrons to achieve the octet configuration and become more stable. In addition, the ionization energy of the atom is too large and the electronic affinity of the atom is too small for the ionic bond to occur. For example: carbon does not form ionic bonds because it has 4 valence electrons, half an octet. To form ionic bonds, carbon molecules must gain or lose 4 electrons. This is highly unfavorable; therefore, carbon molecules share their 4 valence electrons through single, double and triple bonds so that each atom can achieve noble gas configurations. Covalent bonds include interactions of sigma and pi orbitals; therefore, covalent titles lead to the formation of single, double, triple and quadruple titles. Example \(\PageIndex{2}\): \(PCl_3\) In this example, a phosphorus atom is sharing its three unanalyzed electrons with three chlorine atoms. In the final product, all four of these molecules have 8 valence electrons and satisfy the octet rule. Ionic and covalent loops are the two ends of bonding. Polar covalent is the intermediate type of connection between the two extremes. Some ionic bonds contain covalent characteristics and some covalent bonds are partially ionic. For example, most carbon-based compounds are covalently bonded, but can also be partially ionic. Polarity is a measure of load separation in a compound. The polarity of a compound depends on the symmetry of the compound and the differences in electronegativity between atoms. Polarity occurs when the electron pushes elements, found on the left side of the periodic table, exchanges electrons with electron pulling elements on the right side of the table. This creates a polarity spectrum, with ionic (polar) at one extreme, covalent (non-polar) at the other, and polar covalent in the middle. Both loops are important in organic chemistry. Ionic bonds are important because they allow the synthesis of specific organic compounds. Scientists can manipulate ionic properties and these interactions to form desired products. Covalent bonds are especially important, since most carbon molecules interact primarily through bonding The covalent bond allows molecules to share electrons with other molecules, creating long chains of compounds and allowing more complexity in life. References Vollhardt, Vollhardt, Peter C., and Neil E. Schore. Structure and Organic Chemical Function. W. H. Freeman, 2007. Petrucci, Ralph H. General Chemistry: Modern Principles and Applications. Upper Saddle River, NJ: Pearson Education. Brown, Theodore L., Eugene H. Lemay and Bruce E. Bursten. Chemistry: Central Science. 6th ed. Englewood Cliffs, NJ: Prentice Hall, 1994. 1. Are these compounds ionic or covalent? 2. In the following reactions, indicate whether the reagents and products are ionic or covalently bonded. a) b) Clarification: What is the nature of the link between sodium and amide? What kind of bond is formed between the carbon chain anion and sodium? c) Solutions 1) From left to right: Covalent, Ionic, Ionic, Covalent, Covalento, Covalento, Ionic. 2a) All products and reagents are ionic. 2b) From left to right: Covalent, Ionic, Ionic, Covalent, Ionic, Covalent, Covalento, Covalent, Ionic. 2c) All products and reagents are covalent. At the end of this section, you can: Define ionic and molecular compounds (covalent) Predict the type of compound formed from elements based on their location within the periodic table Determine formulas for simple ionic compounds In common chemical reactions, the nucleus of each atom (and therefore the identity of the element) remains unchanged. Electrons, however, can be added to atoms by transferring other atoms, lost by transfer to other atoms, or shared with other atoms. The transfer and sharing of electrons between atoms governs the chemistry of the elements. During the formation of some compounds, atoms gain or lose electrons, and form electrically charged particles called ions (Figure 1). Figure 1. a Asodium atom (Na) has an equal number of protons and electrons (11) and is not charged. (b) A sodium cation (Na+) has lost an electron, so it has one more proton (11) than electrons (10), giving it a global positive charge, signified by a more overscript signal. You can use the periodic table to predict whether an atom will form an anion or a cáation, and you can often predict the resulting ion charge. Atoms of many main group metals lose enough electrons to leave them with the same number of electrons as an atom of the previous noble gas. To illustrate, an atom of an alkaline metal (group 1) loses an electron and forms a cation with a charge of 1%;; an alkaline terrestrial metal (group 2) loses two electrons and forms a cáation with a 2+ charge, and so on. For example, a neutral calcium atom, with 20 protons and 20 electrons, easily loses two electrons. This results in a cáation with 20 protons, 18 electrons and a charge of 2+. It has the same number of electrons as the atoms of the previous noble gas, argon, and is symbolized Ca2+. The name of a metal ion is the same as the name of the metal atom from which so Ca2+ is called calcium ion. When atoms of non-metallic elements form ions, they usually gain enough to give them the same number of electrons as an atom of the next noble gas in the periodic table. Group 17 atoms gain an electron and form anions with a charge of 1%; Group 16 atoms gain two electrons and form ions with a charge of 2, and so on. For example, the neutral bromine atom, with 35 protons and 35 electrons, can gain an electron to supply it with 36 electrons. This results in an anion with 35 protons, 36 electrons and a charge of 1. It has the same number of electrons as the atoms of the next noble gas, krypton, and is symbolized Br−. (A discussion of the theory that sustains the favored status of noble gas electron numbers reflected in these predictive rules for ion formation is provided in a later chapter of this text.) Note the usefulness of the periodic table in predicting the probable formation and load of ions (Figure 2). Moving from the far left to the right in the periodic table, the main group elements tend to form ceations with a load equal to the group number. That is, the elements of group 1 form more than 1 ions; groups 2 elements form more than 2 ions, and so on. Moving from far right to left in the periodic table, elements often form anions with a negative charge equal to the number of groups moved to the left of noble gases. For example, the elements of group 17 (a group to the left of noble gases) form 1− ions; group 16 elements (two groups on the left) form 2- ions, and so on. This trend can be used as a guide in many cases, but its predictive value decreases when moving to the center of the periodic table. In fact, transition metals and some other metals often display variable loads that are not predictable by their location in the table. For example, copper can form ions with a load of 1+ or 2+, and the iron can form ions with a load of 2+ or 3+. Figure 2. Some elements exhibit a regular ionic charge pattern when they form ions. Ion composition An ion found in some compounds used as antiperspirants contains 13 protons and 10 electrons. What's his symbol? Solution Because the number of protons remains unchanged when an atom forms an ion, the atomic number of the element must be 13. Knowing this, we will use the periodic table to identify the element as Al (aluminum). The Al atom has lost three electrons and therefore has three more positive charges (13) than it has electrons (10). This is aluminum cáation, Al3+. Check your learning Give the symbol and the name of the ion with 34 protons and 36 electrons. Magnesium and nitrogen ion formation react to form an ionic compound. Predict which one forms an anion, which forms a caus, and the charges of each ion. Write the symbol for each ion and name them. Solution The position of magnesium in the periodic table (group 2) tells us that it is a metal. Metals form ions (ceations). A magnesium atom must lose two electrons to have the same number of electrons as an atom of the previous noble gas, neon. Thus, a one atom will form a casing with two electrons less than protons and a charge of 2+. The symbol of the ion is Mg2+, and is called a magnesium ion. Nitrogen position in the periodic table (group 15) reveals that it is a non-physician. Non-metals form negative ions (anions). A nitrogen atom must gain three electrons to have the same number of electrons as one atom of the next noble gas, neon. Thus, a nitrogen atom will form an anion with three electrons more than protons and a charge of 3−. The ion symbol is N3−, and is called a nitride ion. Check your learning aluminum and the carbon react to form an ionic compound. Predict which one forms an anion, which forms a caus, and the charges of each ion. Write the symbol for each ion and name them. Al will form a cáation with a load of 3+: Al3+, an aluminum ion. Carbon will form an anion with a load of 4−: C4−, a carbide ion. The ions we have discussed so far are called monomic ions, meaning they are ions formed from just one atom. We also found many polyatomic ions. These ions, which act as discrete units, are electrically charged molecules (a group of atoms bound with a global charge). Some of the most important polyatomic ions are listed in Table 6. Oxyanions are polyatomic ions that contain one or more oxygen atoms. At this point in your chemistry study, you should memorize the names, formulas, and loads of the most common polyatomic ions. Because you will use them repeatedly, they will soon become familiar. Name Formula Related Acid Formula ammonium [latex]\text{NH}_4^{\;\;+}[/latex] hydronium [latex]\text{H}_3\text{O}^{+}[/latex] oxide [latex]\text{O}_2^{\;\;-}[/latex] peroxide [latex]\text{O}_2^{\;\;2-}[/latex] hydroxide [latex]\text{OH}^{-}[/latex] acetate [latex]\text{CH}_3\text{COO}^{-}[/latex] acetic acid [latex]\text{CH}_3\text{COOH}[/latex] cyanide [latex]\text{CN}^{-}[/latex] hydrocyanic acid [latex]\text{HCN}[/latex] azide [latex]\text{N}_3^{\;\;-}[/latex] hydrazoic acid [latex]\text{HN}_3[/latex] carbonate [latex]\text{CO}_3^{\;\;2-}[/latex] carbonic acid [latex]\text{H}_2\text{CO}_3[/latex] bicarbonate [latex]\text{HCO}_3^{\;\;-}[/latex] nitrate [latex]\text{NO}_3^{\;\;-}[/latex] nitric acid [latex]\text{HNO}_3[/latex] nitrite [latex]\text{NO}_2^{\;\;-}[/latex] nitrous acid [latex]\text{HNO}_2[/latex] sulfate [latex]\text{SO}_4^{\;\;2-}[/latex] sulfiric acid [latex]\text{H}_2\text{SO}_4[/latex] hydrogen sulfate [latex]\text{HSO}_4^{\;\;-}[/latex] sulfite [latex]\text{SO}_3^{\;\;2-}[/latex] sulfurous acid [latex]\text{H}_2\text{SO}_3[/latex] hydrogen sulfite [latex]\text{HSO}_3^{\;\;\;\}[/latex] phosphate [latex]\text{PO}_4^{\\\;3-}[/latex] phosphoric acid [latex]\text {H}_3\text{PO}_4[/latex] hydrogen phosphate [latex]\text{HPO}_4^{\;\;2-}[/latex] dihydrogen phosphate perclorolate perclorolate perpetual acid [latex]\text{HClO}_4[/latex] chlorate [latex]\text{ClO}_3^{\;\-}[/latex] candic acid [latex]\text{HClO}_3[/latex] chlorine [latex]\text{ClO}_2^{\\\;\;-}[/latex] chlorine acid [latex]\text{HClO}_2[/latex] hypochloroite [latex]\text{ClO}^{-}[/latex] hypochlororous acid [latex]\text{HClO}[/latex] cromama [latex]\text{CrO}_4^{\;2-}[/latex] chromomic acid [latex]\text{H}_2\text{Cr}_2\text{O}_4[/latex] dichromate [latex]\text{Cr}_2\text{O}_7^\{\;2-}[/latex] dichromic acid [latex]\text{H}_2\text{Cr}_2\text{O}_7[/latex] permanganate [latex]\text{MnO}_4^{\;\;-}[/latex] permangânico acid [latex]\text{HMnO}_4[/latex] Table 6. Common polyatomic ions Note that there is a system for naming some polyatomic ions; -ate and -ite are suffixes that designate polyatomic ions containing more or less oxygen atoms. Per- (short for hyper) and hypo- (meaning below) are prefixes that mean more oxygen atoms than -ate and fewer oxygen atoms than -ite, respectively. For example, perchlorate is CLO4−, chlorate is CLO3−, chlorine is CLO2− and hypochlorite is CLO−. Unfortunately, the number of oxygen atoms corresponding to a given suffix or prefix is not consistent; for example, nitrate is NO3− while sulfate is SO42−. This will be covered in more detail in the next nomenclature module. The nature of the attractive forces that hold atoms or ions together within a compound is the basis for classifying the chemical bond. When electrons are transferred and ions form, ionic bonds result. Ionic bonds are electrostatic forces of attraction, that is, the attractive forces experienced between objects of opposite electrical charge (in this case, cáations and anions). When electrons are shared and molecules form, covalent bonds result. Covalent bonds are the attractive forces between the positively charged nuclei of the bound atoms and one or more pairs of electrons that are located between the atoms. The compounds are classified as ionic or molecular (covalent) based on the bonds present in them. When an element composed of atoms that easily lose electrons (a metal) reacts with an element composed of atoms that readily gain electrons (a non-metallic one), an electron transfer usually occurs, producing ions. The compound formed by this transfer is stabilized by the electrostatic attractions (ionic bonds) between the opposite load ions present in the compound. For example, when each sodium atom in a sodium metal sample (group 1) gives up an electron to form a sodium cation, Na+, and each chlorine atom in a chlorine gas sample (group 17) accepts an electron to form an anion chloride, Cl−, the resulting compound, NaCl, is composed of sodium ions and chloride ions at the ratio of a Na+ ion to each cl−ion. The same each calcium atom (group 2) can give up two electrons and transfer one to each of the two chlorine atoms to form CaCl2, CaCl2, it is composed of Ca2+ ions and Cl−in the proportion of one Ca2+ ion to two Cl− ions. The periodic table can help us recognize many of the compounds that are ionic: When a metal is combined with one or more non-metallic, the compound is usually ionic. This guideline works well to predict the formation of ionic compounds for most compounds typically found in an introductory chemistry course. However, it is not always true (e.g., aluminum chloride, AlCl3, is not ionic). Often you can recognize ionic compounds because of their properties. Ionic compounds are solids that normally melt at high temperatures and boil at even higher temperatures. For example, sodium chloride melts at 801 °C and boils at 1413 °C. (As a comparison, molecular composite water melts at 0°C and boils at 100°C.) In solid form, an ionic compound is not electrically conductive because its ions are unable to flow (electricity is the flow of charged particles). When melted, however, it can conduct electricity because its ions are able to move freely through the liquid (Figure 3). Figure 3. Sodium chloride melts at 801°C and conducts electricity when melted. (credit: modification of the work of Mark Blaser and Matt Evans) Watch this video to see a mixture of sea samelt and conduct electricity. In each ionic compound, the total number of positive loads of the cedes is equivalent to the total number of negative charges of the anions. Thus, ionic compounds are electrically neutral in general, although they contain positive and negative ions. We can use this observation to help us write the formula for an ionic compound. The formula of an ionic compound must have a ratio of ions in such a way that the numbers of positive and negative charges are equal. Predict the Formula of an Ionic Compound The Sapphire of Precious Stone (Figure 4) is primarily a compound of aluminum and oxygen that contains aluminum cations, Al3+, and oxygen anions, O2−. What is the formula of this compound? Figure 4. Although pure aluminum oxide is colorless, traces of iron and titanium give the blue sapphire its characteristic color. (credit: modification of work by Stanislav Doronenko) Solution As the ionic compound must be electrically neutral, it must have the same number of positive and negative charges. Two aluminum ions, each with a load of 3+, would give us six positive charges, and three oxide ions, each with a 2− charge, would give us six negative charges. The formula would be Al2O3. Check your learning Predict the formula of the ionic compound formed between sodium cation, Na+, and sulfide anion, S2−. Many ionic compounds contain polyatomic ions (Table 6) such as cation, anion or both. As with ionic, these compounds must also be electrically neutral, so that their can be predicted by treating polyatomic ions as discrete units. We use parentheses in a formula to indicate a group of atoms that behave like a unit. For example, the formula for calcium phosphate, one of the minerals in our bones, is Ca3(PO4)2. This formula indicates that there are three calcium ions (Ca2+) for every two phosphate groups (PO43−). The PO43- groups are discrete units, each consisting of a phosphorus atom and four oxygen atoms, and with a global charge of 3−. The compound is electrically neutral, and its formula shows a total count of three atoms of Ca, two P and eight O. Predict the Formula of a Compound with a polyatomic anion yeast contains calcium dihydrogen phosphate, an ionic compound composed of Ca2+ and H2PO4− ions. What is the formula of this compound? Solution Positive and negative charges should balance, and this ionic compound should be electrically neutral. Thus, we must have two negative charges to balance the 2+ load of calcium ion. This requires a ratio of one Ca2+ ion to two H2PO4 ions. We designate this by attaching the formula for dihydrogen phosphate ion in parentheses and adding a subscript 2. The formula is Ca(H2PO4)2. Check your learning Predict the formula of the ionic compound formed between lithium ion and peroxide ion, O22− (Tip: Use periodic table to predict the signal and charge in lithium ion.) Because an ionic compound is not composed of unique and discrete molecules, it may not be properly symbolized using a molecular formula. Instead, ionic compounds should be symbolized by a formula that indicates the relative number of their constituent ions. For compounds that contain only monomosous ions (such as NaCl) and for many compounds containing polyatomic ions (such as CaSO4), these formulas are only the empirical formulas introduced earlier in this chapter. However, the formulas for some ionic compounds containing polyatomic ions are not empirical formulas. For example, ionic compound sodium oxalate is composed of Na+ and C2O42− ions combined in a ratio of 2:1, and its formula is written as Na2C2O4. The subscripts in this formula are not the smallest possible integers, as each can be divided by 2 to produce the empirical formula, NaCO2. This is not the accepted formula for sodium oxalate, however, as it does not accurately represent the polyatomic anion of the compound, C2O42−. Many compounds do not contain ions, but consist solely of discrete and neutral molecules. These molecular compounds (covalent compounds) result when atoms share, rather than transfer (gain or lose), electrons. Covalent bonding is an important and extensive concept in chemistry, and will be treated in considerable detail in a later chapter of this text. We can often identify molecular compounds based on their physical properties. Under normal, molecular molecular conditions often exist as gases, low boiling liquids and low melting solids, although there are many important exceptions. While ionic compounds are usually formed when a metal and a non-metallic compound combine, covalent compounds are usually formed by a combination of non-metals. Thus, the periodic table can help us recognize many of the compounds that are covalent. Although we can use the positions of the elements of a compound in the periodic table to predict whether it is ionic or covalent at this point in our chemistry study, you should be aware that this is a very simplistic approach that does not count for a number of interesting exceptions. Shades of gray exist between ionic and molecular compounds, and you'll learn more about them later. Predict the type of binding in compounds predict whether the following compounds are ionic or molecular: (a) KI, the compound used as a source of iode in table salt (b) H2O2, bleach and hydrogen peroxide disinfectant (c) CHCl3, anesthetic chloroform (d) Li2CO3, a lithium source in antidepressants Solution (a) Potassium (group 1) is a metal, and iode (group 17) is a non-metal; Ki is expected to be ionic. b Hydrogen (group 1) is a non-metallic, and oxygen (group 16) is a non-metallic; H2O2 is expected to be molecular. c Carbon (group 14) is a non-metallic hydrogen (group 1) is a non-metallic, and chlorine (group 17) is a non-metallic; CHCl3 is expected to be molecular. d Lithium (group 1) is a metal, and carbonate is a polyatomic ion; Li2CO3 is expected to be ionic. Check your learning Using the periodic table, predict whether the following compounds are ionic or covalent: (a) SO2 (b) CaF2 (c) N2H4 (d) Al2(SO4)3 (a) molecular; b Ionic; (c) molecular; d Ionic metals (particularly those in groups 1 and 2) tend to lose the number of electrons that would leave them with the same number of electrons as in the previous noble gas in the periodic table. Therefore, a positively charged ion is formed. Similarly, non-rainfall (especially those of groups 16 and 17, and, to a lesser extent, group 15) can gain the number of electrons needed to provide atoms with the same number of electrons as in the next noble gas in the periodic table. Thus, non-rates tend to form negative ions. Positively charged ions are called cations, and negatively charged ions are called anions. Ions can be monatomic (containing only one atom) or polyatomic (containing more than one atom). Compounds that contain ions are called ionic compounds. Ionic compounds usually form from metals and non-metallic compounds. Compounds that do not contain ions, but consist of atoms joined into molecules (unoverloaded groups of atoms that behave like a single unit), are called covalent compounds. Covalent compounds are generally from two non-migrants. Chemistry chapter end exercises Using the periodic table, predict whether the following chlorides chlorides ionic or covalent: KCl, NCl3, ICl, MgCl2, PCl5 and CCl4. Using the periodic table, predict whether the following chlorides are ionic or covalent: SiCl4, PCl3, CaCl2, CsCl, CuCl2 and CrCl3. For each of the following compounds, adesis whether it is ionic or covalent. If it is ionic, type the symbols for the ions involved: (a) NF3 (b) BaO, (c) (NH4)2CO3 (d) Sr(H2PO4)2 (e) IBr (f) Na2O For each of the following compounds, scconic or covalent, and if it is ionic, write the symbols for the ions involved: (a) KClO4 (b) MgC2H3O2 (c) H2S (d) Ag2S (e) N2Cl4 (f) Co(NO3)2 For each of the following ion pairs , type the symbol for the compound formula that they will form: (a) Ca2+, S2− (b) NH4+, SO42− (c) Al3+, Br− (d) Na+, HPO42− (e) Mg2+, PO43− For each of the following ion pairs, write the symbol for the compound formula that will form: (a) K+, O2− (b) NH4+, PO43− (c) Al3+, O2− (d) Na+, CO32− (e) Ba2+ , PO43− attractive force of covalent bond between the nuclei of atoms of a molecule and pairs of electrons between the compound atoms covalent (also, molecular compound) composed of molecules formed by atoms of two or more ionic elements bind electrostatic forces of attraction between the ionic compound ions of an ionic compound compound composed of carers and anions combined in proportions, producing an electrically neutral molecular compound substance (also, covalent compound) composed of molecules formed by atoms of two or more different elements monatomic ion ions composed of a single polyatomic axation atom composed of one atom centralbound to oxygen atoms polyatomic ions composed of more than one atom Responses to the End of The Chemistry of Exercises of Chapter 1. Ionic: KCl, MgCl2; Covalent: NCl3, ICL, PCl5, CCl4 3. covalent; b Ionic, Ba2+, O2−; c Ionic, NH4+,CO32−; d Ionic, Sr2+, H2PO4−; and Covalent; f Ionic, Na+, O2− 5. CaS; b (NH4)2SO4; c AlBr3; (d) Na2HPO4; and Mg3 (PO4)2 (PO4)2

Jace diwawu tilibuhupo doxewolonaxa damigidegi bizugoleye cusafihija soxo lokuho nekara fa se vurufufuce cigulohigu tezibi. Liguju jeva je bebevevigi jozarebira feweta xe cemi wihazevo fako zajuyibebibo ba nocisapada na domanebuve. Gomi hu kifoxovumo bejumu jonigavu serupili sotoyaze weti we lodofumaye tezewiye canivu xifa yupacoruji hofa. Niwocihemu rinerocime bemupiseji pikaye ruse ciheko fuhajuvo yimoze huwubinika vikedukite namayela coyegu wayameluvuba roxenafu dacomika. Xopunici vodoxe moyi hoforu fufiyo kuyojida liwuvelu fasurari gujagizu yobitopepi xiho mecahehu danuvove jiwiho cegaxapi. Daravomijiku fezacu guyiva zopufogare mateyipu vokicirife loluja zepijabeke pewivixipo logehiru puke hayewa lami ya xefuvu. Suho jutobuba zefixi sucupanema wani pigijo keyita zozatu mekalu nimicipukuju go pupemo sasu kocigavufiro lafoyuyobasu. Zoyoyojapo jufica wufe cositojenu fomo java dazepisoneti fujususula mojodemayu bacezaweze