PONAVLJANJE I VJEŽBANJE- Molekule el.tvari i kemijskih spojeva

**1. a) Na crtu uz model molekule upiši odgovarajuće ime tvari.**

|  |  |  |
| --- | --- | --- |
| a48_vodik_model.jpg | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 1. amonijak  2. sumporovodik  3. ozon  4. sumporov dioksid  5. fosfor  6. vodik  7. klorovodik  8. sumporov trioksid  9. voda  10. dušikov dioksid |
| 2-ammonia-molecule.jpg | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 616px-Sulfur-trioxide-3D-vdW.png | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| a50_HCl_model.jpg | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| a52_H2O_model.jpg | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 750px-Sulfur-dioxide-3D-vdW.png | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 800px-Nitrogen-dioxide-3D-vdW.png | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| a49_fosfor_model.jpg | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 800px-Ozone-3D-vdW.png | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 20060715233810!Hydrogen-sulfide-3D-vdW.png | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**b) Izdvoji:**

A) molekule elementarnih tvari: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

B) .molekule kemijskih spojeva:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. **Koje su od navedenih elementarnih tvari građene od atoma, a koje od molekula?**

**vodik, cink, željezo, kisik, sumpor, fosfor, klor, ugljik, helij, dušik, jod, bakar**

atomi:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

molekule:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. **Elementarne tvari iz zadatka 2. prikaži odgovarajućim kemijskim oznakama.**

vodik\_\_\_\_\_\_\_ kisik \_\_\_\_\_\_\_\_\_ klor\_\_\_\_\_\_\_\_\_ dušik\_\_\_\_\_\_\_\_\_

cink \_\_\_\_\_\_\_ sumpor \_\_\_\_\_\_ ugljik \_\_\_\_\_\_\_ jod \_\_\_\_\_\_\_\_\_\_

željezo \_\_\_\_\_ fosfor \_\_\_\_\_\_\_\_ helij \_\_\_\_\_\_\_\_ bakar \_\_\_\_\_\_\_\_

3. **Napiši značenje sljedećih oznaka:**

2 N \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

N2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2 N2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3 O \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

O2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3 O2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4 H \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

H2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2 H2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. **Među navedenim parovima odaberi parove molekula koji se sastoje od istog broja atoma**. *Zaokruži slovo ispred točnih odgovora.*

a) 2 H2 i P4

b) 4 N2 i 3 O2

c) 2 O3 i 3 O2

d) I2 i 2 Cl2

5. **Kemijski element X nalazi se u 15. skupini periodnog sustava elemenata. Molekula te elementarne tvari može se prikazati kao X2.**

a) Napiši kemijski simbol elementa X. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) Napiši kemijsku formulu elementarne tvari X. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c) Odredi: *A*r(X) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**6.** Napiši kvantitativno značenje sljedećih oznaka.

a) H2O \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) 3 HCl \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c) 2 CH4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d) 2 O3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e) 5 O \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

f) 4 Cl \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**7. Modelima prikaži b) , d) i e) primjer iz 6. zadatka**

**8.** Odredi broj pojedine vrste atoma u sljedećim spojevima kao što je napravljeno u prvom primjeru.

a) 7 HNO3 \_\_\_\_\_\_\_\_\_\_7 H, 7 N i 21 O\_\_\_\_\_\_\_\_\_\_\_\_

b) 4 ZnSO4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c) 3 N2O3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d) 2 H2SO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e) 8 Na2O \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

f) 5 CaCO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

g) 6 S8 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

h) 3 P4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

i) 3 Mg(OH)2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

k) 4 Na2SO4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

l) Mg(NO3)2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**7.** Izračunaj masu sedam atoma kalcija.

**8.** Koliko je puta masa atoma tricija veća od mase atoma procija?