

Worksheet: Relative Formula Mass



Question Video

Q1: Which of these substances has the highest molar mass?

- A The herbicide paraquat, $C_{12}H_{14}N_2Cl_2$
- B Caffeine, $C_8H_{10}N_4O_2$
- C A typical soap, $C_{17}H_{35}CO_2Na$
- D The anesthetic halothane, $C_2HBrClF_3$
- E Urea, $CO(NH_2)_2$

Q2: To the nearest g/mol, what is the relative formula mass (M_r) of Na_2O (sodium oxide)?

- A 39 g/mol
- B 111 g/mol
- C 30 g/mol
- D 27 g/mol
- E 62 g/mol

Q3: What is the M_r of phosphorus trifluoride (PF_3)?

A 50 g/mol

B 102 g/mol

C 88 g/mol

D 115 g/mol

E 42 g/mol

Q4: What is the M_r of silane (SiH_4)?

A 32 g/mol

B 28 g/mol

C 44 g/mol

D 29 g/mol

E 18 g/mol

Q5: What is the M_r of xenon difluoride (XeF_2)?

A 199 g/mol

B 131 g/mol

C 169 g/mol

D 219 g/mol

E 150 g/mol

Q6: The relative atomic mass (A_r) of sodium is 23 g/mol, that of oxygen is 16 g/mol, and that of hydrogen is 1 g/mol. What is the relative formula mass (M_r) of NaOH (sodium hydroxide)?

A 23 g/mol

B 1 g/mol

C 39 g/mol

D 40 g/mol

E 16 g/mol

Q7: Using the Periodic Table to find the relative atomic masses of its elements, calculate the relative formula mass (M_r) of CO_2 (carbon dioxide) to the nearest g/mol.

A 28 g/mol

B 384 g/mol

C 32 g/mol

D 44 g/mol

E 268 g/mol

Q8: Using the Periodic Table to find the relative atomic masses of its elements, calculate the relative formula mass (M_r) of CH_2O (formaldehyde).

A 30 g/mol

B 16 g/mol

C 29 g/mol

D 28 g/mol

E 34 g/mol

Q9: What is the relative formula mass (M_r) of CH_3OH (methanol)? Use the periodic table to find the relative atomic masses of the elements.

A 30 g/mol

B 31 g/mol

C 32 g/mol

D 28 g/mol

E 12 g/mol

Q10: What is the relative formula mass (M_r) of MgF_2 (magnesium fluoride)?

A 43 g/mol

B 62 g/mol

C 24 g/mol

D 47 g/mol

E 19 g/mol

Q11: What is the relative formula mass (M_r) of NH_3 (ammonia)?

A 45 g/mol

B 8 g/mol

C 17 g/mol

D 15 g/mol

E 10 g/mol

Q12: A substance has the formula unit AB. What is the relative formula mass of this substance in terms of $A_r(A)$ and $A_r(B)$, the relative atomic masses of A and B?

A $A_r(A) + A_r(B)$

B $A_r(A) \times A_r(B)$

C $A_r(A) - A_r(B)$

D $A_r(A) \div A_r(B)$

Q13: A substance has the formula unit AB_2 . What is the relative formula mass of this substance in terms of A_r (A) and A_r (B), the relative atomic masses of A and B?

A $A_r(A) + (A_r(B))^2$

B $A_r(A) + \frac{A_r(B)}{2}$

C $2(A_r(A) + A_r(B))$

D $A_r(A) + 2A_r(B)$

E $2A_r(A) + A_r(B)$

Q14: The relative atomic mass (A_r) of carbon is 12 g/mol, and the A_r of oxygen is 16 g/mol. What is the relative formula mass (M_r) of CO (carbon monoxide)?

A 12 g/mol

B 14 g/mol

C 28 g/mol

D 4 g/mol

E 16 g/mol

Q15: The relative atomic mass (A_r) of carbon is 12 g/mol, and the A_r of hydrogen is 1 g/mol. What is the relative formula mass (M_r) of CH_4 (methane)?

A 16 g/mol

B 4 g/mol

C 13 g/mol

D 12 g/mol

E 1 g/mol