



MOLES

1) Calculate the number of moles of each of the following substances. Give your answers to 3 sig figs.

- a) 90.0 g of H_2O
- b) 20.0 g of C_4H_{10}
- c) 685 g of NH_3
- d) 102 tons of O_2
- e) 2.00 kg of Al_2O_3
- f) 20.6 mg of Au

2) Calculate the mass of each of the following substances. Give your answers to 3 sig figs.

- a) 4.00 moles of N_2
- b) 0.100 moles of HNO_3
- c) 0.0200 moles of K_2O
- d) 2.50 moles of PH_3
- e) 0.400 moles of $\text{C}_2\text{H}_5\text{OH}$
- f) 10.0 moles of $\text{Ca}(\text{OH})_2$

3) 0.0200 moles of a compound is found to have a mass of 1.64 g. Find the formula mass of the compound. Give your answers to 3 sig figs.

| Area | Strength | To develop | Area | Strength | To develop | Area | Strength | To develop |
|---------------------------------|----------|------------|--------------------------|----------|------------|------------------------------------|----------|------------|
| Done with care and thoroughness | | | Can find moles from mass | | | Can convert units | | |
| Shows suitable working | | | Can find mass from moles | | | Can find M_r from mass and moles | | |
| Can work out M_r | | | Can use sig figs | | | Gives units | | |