Calculating Molar Mass and Particle Number

Determine the molar mass for the following compounds/molecules:

1. NaCl
2. O_2
3. Fe_2O_3
4. Na_2O
5. $Ca(NO_3)_2$

Formulas:

$N = nN_A$

$n = \frac{m}{M}$

N = # of particles
n = moles (mol)
N_A = Avogadro's number
M = molar mass (g/mol)
m = mass (g)

How many particles are in 310 grams of Na_2O?

How many grams are in 18.06×10^{25} particles of $Ca(NO_3)_2$?

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TABLEOFRELATIVEATOMICMASS

Element	Symbol	Proton number	Relative atomic mass
Aluminum	Al	13	27.0
Antimony	Sb	51	121.76
Argon	Ar	18	40.0
Arsenic	As	33	74.9
Barium	Ba	56	137.3
Beryllium	Be	4	9.0
Bismuth	Bi	83	208.0
Boron	B	5	10.8
Bromine	Br	35	79.9
Cadmium	Cd	48	112.4
Calcium	Ca	20	40.1
Carbon	C	6	12.0
Cerium	Ce	58	140.1
Cesium	Cs	55	132.9
Chlorine	Cl	17	35.5
Chromium	Cr	24	52.0
Cobalt	Co	27	58.9
Copper	Cu	29	63.6
Fluorine	F	9	19.0
Gold	Au	79	197.0
Helium	He	2	4.0
Hydrogen	H	1	1.0
Iodine	I	53	126.9
Iron	Fe	26	55.9
Krypton	Kr	36	83.8
Lead	Pb	82	207.2
Lithium	Li	3	6.9
Magnesium	Mg	12	24.3
Manganese	Mn	25	54.9
Mercury	Hg	80	200.6
Neon	Ne	10	20.2
Nickel	Ni	28	58.7
Nitrogen	N	7	14.0
Oxygen	O	8	16.0
Phosphorus	P	15	31.0
Platinum	Pt	78	195.1
Potassium	K	19	39.1
Protactinium	Pa	91	231.0
Radium	Ra	88	226.0
Radon	Rn	86	222.0

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Rubidium	Rb	37	85.5
Scandium	Sc	21	45.0
Selenium	Se	34	79.0
Silicon	Si	14	28.09
Silver	Ag	47	107.9
Sodium	Na	11	23.0
Strontium	Sr	38	87.6
Sulphur	S	16	32.07
Tin	Sn	50	118.7
Tungsten	W	74	183.9
Uranium	U	92	238.0
Zinc	Zn	30	65.4

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