

Formulas:

$$\text{energy efficiency} = \frac{\text{amount of useful energy}}{\text{amt. of energy consumed}} \times 100\%$$

$$C = \frac{m}{V} \quad \text{C: concentration; m = mass; V = volume}$$

(june exam has more but the ones not listed deal with material that's NOT on the January exam because it'll be covered in February!)



PERIODIC TABLE OF THE ELEMENTS

| IA 1 | | IIA 2 | | IIIB 3 | | | IVB 4 | | VB 5 | | VIB 6 | | VIIB 7 | | VIII 8, 9, 10 | | IB 11 | | IIB 12 | | IIIA 13 | | IVA 14 | | VA 15 | | VIA 16 | | VIIA 17 | | VIIIA 18 | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|-----------------|-----------------|-------------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|--------------------|--------------------|--------------------|------------------------------|--------------------|--------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|-------------------|-------------------|
| 1 H 1.01 | 3 Li 6.94 | 4 Be 9.01 | 12 Mg 24.31 | 21 Sc 44.96 | 22 Ti 47.90 | 23 V 50.94 | 24 Cr 52.00 | 25 Mn 54.94 | 26 Fe 55.85 | 27 Co 58.93 | 28 Ni 58.71 | 29 Cu 63.55 | 30 Zn 65.39 | 31 Ga 69.72 | 32 Ge 72.59 | 33 As 74.92 | 34 Se 78.96 | 35 Br 79.90 | 36 Kr 83.80 | 37 Rb 85.47 | 38 Sr 87.62 | 39 Y 88.91 | 40 Zr 91.22 | 41 Nb 92.91 | 42 Mo 95.94 | 43 Tc 98.91 | 44 Ru 101.07 | 45 Rh 102.91 | 46 Pd 106.40 | 47 Ag 107.87 | 48 Cd 112.41 | 49 In 114.82 | 50 Sn 118.71 | 51 Sb 121.75 | 52 Te 127.60 | 53 I 126.90 | 54 Xe 131.30 | 55 Cs 132.91 | 56 Ba 137.33 | 57-71 La-Lu 178.49-104 | 72 Hf 178.49 | 73 Ta 180.95 | 74 W 183.85 | 75 Re 186.21 | 76 Os 190.20 | 77 Ir 192.22 | 78 Pt 195.09 | 79 Au 196.97 | 80 Hg 200.59 | 81 Tl 204.37 | 82 Pb 207.20 | 83 Bi 208.98 | 84 Po (209) | 85 At (210) | 86 Rn (222) |
| 57 La | 58 Ce | 59 Pr | 60 Nd | 61 Pm | 62 Sm | 63 Eu | 64 Gd | 65 Tb | 66 Dy | 67 Ho | 68 Er | 69 Tm | 70 Yb | 71 Lu | 89-103 Ac-Lr (226) | 104 Rf (261) | 105 Ha (262) | 106 Mc (288) | 107 Ds (289) | 108 Ts (294) | 109 Og (294) | 110 Nh (286) | 111 Fl (289) | 112 Mc (289) | 113 Nh (284) | 114 Fl (285) | 115 Nh (284) | 116 Nh (284) | 117 Nh (284) | 118 Nh (284) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 89 Ac | 90 Th | 91 Pa | 92 U | 93 Np | 94 Pu | 95 Am | 96 Cm | 97 Bk | 98 Cf | 99 Es | 100 Fm | 101 Md | 102 No | 103 Lr | 104 Uu (261) | 105 Uub (262) | 106 Uuq (263) | 107 Uuq (263) | 108 Uuq (263) | 109 Uuq (263) | 110 Uuq (263) | 111 Uuq (263) | 112 Uuq (263) | 113 Uuq (263) | 114 Uuq (263) | 115 Uuq (263) | 116 Uuq (263) | 117 Uuq (263) | 118 Uuq (263) | | | | | | | | | | | | | | | | | | | | | | | | | | |

