

CONSTANTS

$g = 9.8 \text{ N/kg}$

$c = 4.19 \text{ J/g/}^\circ\text{C}$

Liquid water`s density: 1.0 g/ml

EST-400.A05 • Student Booklet

Appendix 1

FORMULAS			
$C = \frac{m}{v}$	C: concentration m: mass V: volume	$W = \Delta E$	W: work ΔE : variation in energy
$V = RI$	V: potential difference R: resistance I: electric current intensity	$W = F\Delta d$	W: work F: force Δd : distance travelled
$R_{eq} = R_1 + R_2 + \dots$	R_{eq} : equivalent resistance	$F_g = mg$	F_g : gravitational force m: mass g: gravitational field intensity
$\frac{1}{R_{eq}} = \frac{1}{R_1} + \frac{1}{R_2} + \dots$	R_{eq} : equivalent resistance	$E_p = mgh$	E_p : gravitational potential energy m: mass g: gravitational field intensity h: height
$E = P\Delta t$	E: energy consumed P: power Δt : change in time	$E_k = \frac{1}{2}mv^2$	E_k : kinetic energy m: mass v: velocity
$P = VI$	P: power V: potential difference I: electric current intensity	$Q = mc\Delta T$	Q: quantity of heat m: mass c: specific heat capacity ΔT : change in temperature
$F_e = \frac{kq_1q_2}{r^2}$	F_e : electrical force k: Coulomb's constant q: charge of particle r: distance between two particles		

PERIODIC TABLE OF THE ELEMENTS

IA		IIA		IIIB			IVB			VB			VIB			VIIB			VIII			IB			IIB			IIIA		IVA		VA		VIA		VIIA		VIII A	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36				
1 H 1.01	2 He 4.00	3 Li 6.94	4 Be 9.01	5 B 10.81	6 C 12.01	7 N 14.01	8 O 16.00	9 F 19.00	10 Ne 20.18	11 Na 22.99	12 Mg 24.31	13 Al 26.98	14 Si 28.09	15 P 30.97	16 S 32.07	17 Cl 35.45	18 Ar 39.95	19 K 39.10	20 Ca 40.08	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 La 138.91	58 Ce 140.12	59 Pr 140.91	60 Nd 144.24	61 Pm 145	62 Sm 150.36	63 Eu 151.96	64 Gd 157.25	65 Tb 158.93	66 Dy 162.50	67 Ho 164.93	68 Er 167.26	69 Tm 168.93	70 Yb 173.04	71 Lu 174.97					
87 Fr (223)	88 Ra (226)	89-103 Ac-Lr	104 Rf (261)	105 Ha (262)	106 Mc (288)	107 Ds (289)	108 Ts (294)	109 Og (294)	110 Nh (294)	111 Fl (289)	112 Lv (293)	113 Nh (288)	114 Fl (288)	115 Mc (288)	116 Lv (293)	117 Ts (294)	118 Og (294)	119 Nh (294)	120 Ds (294)	121 Nh (294)	122 Fl (294)	123 Mc (294)	124 Lv (293)	125 Ts (294)	126 Og (294)	127 Nh (294)	128 Fl (294)	129 Mc (294)	130 Lv (293)	131 Ts (294)	132 Og (294)	133 Nh (294)	134 Fl (294)	135 Mc (294)	136 Lv (293)	137 Ts (294)	138 Og (294)		



