

Esercizio 1 torta a cuocere									
massa kg	1								
D, cm	28		facce	2					
volume, cm3	1000		Lc Biot	0.008					
rho	1000		Bi	0.175					
			lambda1	0.405333					
			A1	1.027398					
Alat cm2	615		alfa	1.63E-07					
m2	0.0615								
sp cm	1.625		tempo	900					
m	0.016249								
lambda	0.65		Fo = tau	2.22					
Cp	4000		teta_x=0	0.71					
T_amb	200		T x=0	78.64					
h	14		teta_sup	0.66					
T_iniz	30		T sup	88.47					

0.15	0.175	0.2	Bi
0.3779	0.405333	0.4328	Lambda1
1.0237	1.027398	1.0311	A1
11			indice

Esercizio 2 Aletta, Re-Nu piana									
Tfilm	100	w m/s	10	lambda_ac	16	Tambiente	20		
ro_aria	0.95	L_Re	0.080	perim	0.168	Tbase	180		
Cp	1007	Spessore	0.004	Area	0.00032	Tsicura	45		
lambda	0.0317	Re	36409	m	38.4	Lsicura m	0.048		
mu	2.08E-05	Nu	113.1	1/m	0.026	efficacia	13.7		
Pr	0.711	h	44.88			Q'_base>fi	31.4		

Esercizio 3 Fattori vista									
	Vert-buco	vert-tutto	vert-hor		T °C	90	20		
A cm	80	80			T hK	3.63	2.93		
B cm	40	160			A m2	0.8	1.2		
c cm	89.44	178.89			eps	0.8	0.9		
F vista	0.191	0.382	0.191		F_vert-hor	0.191			
					Q' W	81.5			

Esercizio 4 Q, L, politropica									
Mm	29		1	2	3	1			
R	286.69	V	1	1	0.25	1.00			
Cp	1003.41	P bar	1	1.444	10.05	1.00			
Cv	716.72	T °C	20	150	463	20			
gamma	1.4	T K	293	423	736	293			
m [kg]	1.0000	n			1.4	1.66			
	1.1905	deltaU J		93174.1	224682.8	-317857			
		Qin [J]		93174.1	0.0	-90206			
		Lin [J]			224682.8	-227651			

Es 5 Rankine									
			T °C	P kPa	x	h	s		
Tmin °C	40	1=LiqSat	40	7.384	0	167.6	0.5725	Qin	2952.78
Pmax bar	160	2	40	16000	nd (<0)	183.6	"	L_nu_Tid	1225.51
Tmax °C	450	2re				183.6		eta1	41.5%
etaPpompa	1	5	450	16000	nd (>1)	3136.375	6.08755	etaC	56.7%
etaTurb	1	6	40	7.384	0.718	1894.8	6.08755	eta2	73.2%
		6re			0.718	1894.8			73.3%
		VapSat	40	7.384	1	2574.3	8.257		

Esercizio 6 frigorifero				K	°C	
T_stanza	28	Lin	150	Tinf	262	-11
T_frigor	4	COPid	3.80	Tsup	331	58
deltaT_ev	15	COPre	2.09	deltaT	69	
deltaT_cond	30	Q'sup W	463			
eff	55%	Q'inf W	313			

Es 7 aria umida mix, no condensa									
	m' kg/s	T °C	UR	Psat	Pvap	x	h	Trug	
fredda	1	10	100%	1227.6	1227.6	0.0076	29.3		
calda	2	28	65%	3815.2	2479.9	0.0156	68.0		
mix	3	22.1	77%	2680.372	2065.9	0.0129	55.0686	17.97	

Es 8 Moody									
D ug [m]	0.02	L tubo	5	f attrito	0.03				
A ug [m2]	0.000314	D tubo	0.02	ro w2/2 tut	49050				
Zmax [m]	5	w tubo	9.905						
vel@Zmax m/s	0	rho	1000		deltaP Pa	deltaP Bar	J/kg	Watt	
Zugello [m]	0	mi	0.001	attrito	367875	3.68	368		
vel@Zug m/s	9.905	ni	0.000001	Z = vel	49000	0.49	49		
m' kg/s	3.110	Re	198091	totale	416875	4	417	1296	