รายการอ้างอิง

ภาษาไทย

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ภาคผนวก

ตัวแปรที่ใช้ในการวิเคราะห์

สภาพอากาศ

ชื่อตัวแปร	คำอธิบาย	หน่วย
date	วัน	
time	เวลา	
db	อุณหภูมิกระเปาะแห้ง	Degree C
wb	อุณหภูมิกระเปาะเปียก	Degree C
rh	ความชื้นสัมพัทธ์	%
velo	ความเร็วลม	m / s
rad	ค่าการแผ่รังสีดวงอาทิตย์	W / m^2
cloud	สภาพท้องฟ้า	
t_lag	อุณหภูมิ time lag	Degree C
t_soil	อุณหภูมิดิน	Degree C

การควบคุมอาคาร

ชื่อตัวแปร	คำอธิบาย	หน่วย
vent	การเปิดประตูหน้าต่างให้ cross ventilation	0 - 1
top_w	การเปิดหน้าต่างด้านบนเพื่อระบายอากาศ	0 - 1
in_h_g	การเปิด internal heat gain ภายในอาคาร	0 - 1

สภาพ micro climate

ชื่อตัวแปร	คำอธิบาย	หน่วย
db_micro	อุณหภูมิกระเปาะแห้งในสภาพอากาศเฉพาะที่	Degree C
wb_micro	อุณหภูมิกระเปาะเปียกในสภาพอากาศเฉพาะที่	Degree C
rh_micro	ความชื้นสัมพัทธ์ในสภาพอากาศเฉพาะที่	%
v_micro	ความเร็วลมในสภาพอากาศเฉพาะที่	m / s

อาคารกรณีศึกษาที่ 1 : อาคารโรงเรียนคชเผือกอนุสรณ์

สภาพอากาศภายในอาคาร (room 1-1)

ชื่อตัวแปร	คำอธิบาย	หน่วย
ta_rm11	อุณหภูมิอากาศในห้อง อาคาร 1 ชั้น 1	Degree C
rh_rm11	ความชื้นสัมพัทธ์ในห้อง อาคาร 1 ชั้น 1	%

สภาพอากาศภายในอาคาร (room 1-2)

ชื่อตัวแปร	คำอธิบาย	หน่วย
ta_rm12	อุณหภูมิอากาศในห้อง อาคาร 1 ชั้น 2	Degree C
rh_rm12	ความชื้นสัมพัทธ์ในห้อง อาคาร 1 ชั้น 2	%

สภาพอากาศภายในอาคาร (room 1-3)

ชื่อตัวแปร	คำอธิบาย	หน่วย
ta_rm13	อุณหภูมิอากาศในห้อง อาคาร 1 ชั้น 3	Degree C
rh_rm13	ความชื้นสัมพัทธ์ในห้อง อาคาร 1 ชั้น 3	%

อาคารกรณีศึกษาที่ 2 : อาคารโรงเรียนอาคารทดสอบ

สภาพอากาศภายในอาคาร (room 2-1)

ชื่อตัวแปร	คำอธิบาย	หน่วย
ta_rm21	อุณหภูมิอากาศในห้อง อาคาร 2 ชั้น 1	Degree C
rh_rm21	ความชื้นสัมพัทธ์ในห้อง อาคาร 2 ชั้น 1	%
mrt_rm21	อุณหภูมิผิวเฉลี่ยโดยรอบในห้อง อาคาร 2 ชั้น 1	Degree C
v_rm21	ความเร็วลมในห้อง อาคาร 2 ชั้น 1	m / s

สภาพอากาศภายในอาคาร (room 2-2)

ชื่อตัวแปร	คำอธิบาย	หน่วย
ta_rm22	อุณหภูมิอากาศในห้อง อาคาร 2 ชั้น 2	Degree C
rh_rm22	ความชื้นสัมพัทธ์ในห้อง อาคาร 2 ชั้น 2	%
mrt_rm22	อุณหภูมิผิวเฉลี่ยโดยรอบในห้อง อาคาร 2 ชั้น 2	Degree C
v_rm22	ความเร็วลมในห้อง อาคาร 2 ชั้น 1	m / s

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
WB_MICRO	24.0608	3.1680	306
DB	27.8956	5.3563	306
WB	24.1711	3.2667	306
RAD	72.8088	96.0319	306
TIME	10:46	6:48	306

Correlations

		WB_MICRO	DB	WB
Pearson Correlation	WB_MICRO	1.000	.794	.976
	DB	.794	1.000	.895
	WB	.976	.895	1.000
	RAD	.370	.695	.473
	TIME	.153	.294	.210
Sig. (1-tailed)	WB_MICRO	.	.000	.000
	DB	.000	.	.000
	WB	.000	.000	.
	RAD	.000	.000	.000
	TIME	.004	.000	.000
N	WB_MICRO	306	306	306
	DB	306	306	306
	WB	306	306	306
	RAD	306	306	306
	TIME	306	306	306

Correlations

		RAD	TIME
Pearson Correlation	WB_MICRO	.370	.153
	DB	.695	.294
	WB	.473	.210
	RAD	1.000	.062
	TIME	.062	1.000
Sig. (1-tailed)	WB_MICRO	.000	.004
	DB	.000	.000
	WB	.000	.000
	RAD	.	.139
	TIME	.139	.
N	WB_MICRO	306	306
	DB	306	306
	WB	306	306
	RAD	306	306
	TIME	306	306

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	WB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	DB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	RAD	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: WB_MICRO

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.976[a]	.952	.952	.6920
2	.992[b]	.985	.984	.3957
3	.993[c]	.985	.985	.3870

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	.952	6088.085	1	304	.000
2	.032	626.738	1	303	.000
3	.001	14.747	1	302	.000

a. Predictors: (Constant), WB

b. Predictors: (Constant), WB, DB

c. Predictors: (Constant), WB, DB, RAD

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2915.534	1	2915.534	6088.085	.000[a]
	Residual	145.583	304	.479		
	Total	3061.117	305			
2	Regression	3013.671	2	1506.836	9623.113	.000[b]
	Residual	47.445	303	.157		
	Total	3061.117	305			
3	Regression	3015.880	3	1005.293	6711.392	.000[c]
	Residual	45.236	302	.150		
	Total	3061.117	305			

a. Predictors: (Constant), WB

b. Predictors: (Constant), WB, DB

c. Predictors: (Constant), WB, DB, RAD

d. Dependent Variable: WB_MICRO

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.184	.296		4.001	.000
	WB	.946	.012	.976	78.026	.000
2	(Constant)	-.615	.184		-3.347	.001
	WB	1.295	.016	1.335	83.268	.000
	DB	-.237	.009	-.401	-25.035	.000
3	(Constant)	-.507	.182		-2.784	.006
	WB	1.326	.017	1.367	77.164	.000
	DB	-.272	.013	-.459	-21.147	.000
	RAD	1.393E-03	.000	.042	3.840	.000

Coefficients[a]

Model		95% Confidence Interval for B		Correlations		
		Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	.602	1.766			
	WB	.923	.970	.976	.976	.976
2	(Constant)	-.977	-.253			
	WB	1.264	1.326	.976	.979	.596
	DB	-.256	-.219	.794	-.821	-.179
3	(Constant)	-.865	-.148			
	WB	1.292	1.359	.976	.976	.540
	DB	-.297	-.246	.794	-.773	-.148
	RAD	.001	.002	.370	.216	.027

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	WB	1.000	1.000
2	(Constant)		
	WB	.199	5.027
	DB	.199	5.027
3	(Constant)		
	WB	.156	6.412
	DB	.104	9.632
	RAD	.405	2.469

a. Dependent Variable: WB_MICRO

Excluded Variables[d]

Model		Beta In	t	Sig.	Partial Correlation
1	DB	-.401[a]	-25.035	.000	-.821
	RAD	-.119[a]	-9.491	.000	-.479
	TIME	-.054[a]	-4.325	.000	-.241
2	RAD	.042[b]	3.840	.000	.216
	TIME	-.010[b]	-1.312	.191	-.075
3	TIME	-.001[c]	-.193	.847	-.011

Excluded Variables[d]

Model		Collinearity Statistics		
		Tolerance	VIF	Minimum Tolerance
1	DB	.199	5.027	.199
	RAD	.776	1.289	.776
	TIME	.956	1.046	.956
2	RAD	.405	2.469	.104
	TIME	.900	1.112	.187
3	TIME	.818	1.222	8.901E-02

a. Predictors in the Model: (Constant), WB

b. Predictors in the Model: (Constant), WB, DB

c. Predictors in the Model: (Constant), WB, DB, RAD

d. Dependent Variable: WB_MICRO

Coefficient Correlations[a]

Model			WB	DB	RAD
1	Correlations	WB	1.000		
	Covariances	WB	1.471E-04		
2	Correlations	WB	1.000	-.895	
		DB	-.895	1.000	
	Covariances	WB	2.418E-04	-1.320E-04	
		DB	-1.320E-04	8.995E-05	
3	Correlations	WB	1.000	-.894	.465
		DB	-.894	1.000	-.691
		RAD	.465	-.691	1.000
	Covariances	WB	2.951E-04	-1.972E-04	2.895E-06
		DB	-1.972E-04	1.649E-04	-3.220E-06
		RAD	2.895E-06	-3.220E-06	1.315E-07

a. Dependent Variable: WB_MICRO

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index
1	1	1.991	1.000
	2	8.980E-03	14.890
2	1	2.979	1.000
	2	1.838E-02	12.733
	3	2.303E-03	35.968
3	1	3.490	1.000
	2	.497	2.650
	3	1.143E-02	17.473
	4	1.634E-03	46.221

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions			
		(Constant)	WB	DB	RAD
1	1	.00	.00		
	2	1.00	1.00		
2	1	.00	.00	.00	
	2	.49	.00	.15	
	3	.51	1.00	.85	
3	1	.00	.00	.00	.01
	2	.00	.00	.00	.42
	3	.78	.02	.09	.26
	4	.22	.98	.90	.31

a. Dependent Variable: WB_MICRO

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
DB_MICRO	27.3558	4.6297	306
DB	27.8956	5.3563	306
WB	24.1711	3.2667	306
RAD	72.8088	96.0319	306
TIME	10:46	6:48	306

Correlations

		DB_MICRO	DB	WB
Pearson Correlation	DB_MICRO	1.000	.970	.950
	DB	.970	1.000	.895
	WB	.950	.895	1.000
	RAD	.614	.695	.473
	TIME	.274	.294	.210
Sig. (1-tailed)	DB_MICRO	.	.000	.000
	DB	.000	.	.000
	WB	.000	.000	.
	RAD	.000	.000	.000
	TIME	.000	.000	.000
N	DB_MICRO	306	306	306
	DB	306	306	306
	WB	306	306	306
	RAD	306	306	306
	TIME	306	306	306

Correlations

		RAD	TIME
Pearson Correlation	DB_MICRO	.614	.274
	DB	.695	.294
	WB	.473	.210
	RAD	1.000	.062
	TIME	.062	1.000
Sig. (1-tailed)	DB_MICRO	.000	.000
	DB	.000	.000
	WB	.000	.000
	RAD	.	.139
	TIME	.139	.
N	DB_MICRO	306	306
	DB	306	306
	WB	306	306
	RAD	306	306
	TIME	306	306

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	TIME, RAD, WB, DB[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: DB_MICRO

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.988[a]	.975	.975	.7332

Model Summary

	Change Statistics				
Model	R Square Change	F Change	df1	df2	Sig. F Change
1	.975	2965.384	4	301	.000

a. Predictors: (Constant), TIME, RAD, WB, DB

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6375.754	4	1593.939	2965.384	.000[a]
	Residual	161.792	301	.538		
	Total	6537.546	305			

a. Predictors: (Constant), TIME, RAD, WB, DB

b. Dependent Variable: DB_MICRO

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.270	.345		-3.678	.000
	DB	.503	.026	.582	19.162	.000
	WB	.598	.034	.422	17.763	.000
	RAD	4.336E-04	.001	.009	.602	.548
	TIME	2.676E-06	.000	.014	1.414	.158

Coefficients[a]

Model		95% Confidence Interval for B		Correlations		
		Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	-1.949	-.590			
	DB	.452	.555	.970	.741	.174
	WB	.532	.664	.950	.715	.161
	RAD	-.001	.002	.614	.035	.005
	TIME	.000	.000	.274	.081	.013

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	DB	.089	11.234
	WB	.146	6.856
	RAD	.368	2.715
	TIME	.818	1.222

a. Dependent Variable: DB_MICRO

Coefficient Correlations[a]

Model			TIME	RAD	WB	DB
1	Correlations	TIME	1.000	.301	.255	-.378
		RAD	.301	1.000	.505	-.724
		WB	.255	.505	1.000	-.897
		DB	-.378	-.724	-.897	1.000
	Covariances	TIME	3.581E-12	4.102E-10	1.621E-08	-1.878E-08
		RAD	4.102E-10	5.188E-07	1.225E-05	-1.370E-05
		WB	1.621E-08	1.225E-05	1.132E-03	-7.925E-04
		DB	-1.878E-08	-1.370E-05	-7.925E-04	6.901E-04

a. Dependent Variable: DB_MICRO

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index
1	1	4.248	1.000
	2	.535	2.816
	3	.204	4.559
	4	1.103E-02	19.625
	5	1.472E-03	53.712

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions				
		(Constant)	DB	WB	RAD	TIME
1	1	.00	.00	.00	.01	.01
	2	.00	.00	.00	.37	.04
	3	.01	.00	.00	.02	.82
	4	.79	.08	.03	.24	.03
	5	.20	.92	.97	.36	.10

a. Dependent Variable: DB_MICRO

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
RH_MICRO	88.8419	12.9463	167
TIME	10:37	6:32	167
RH	89.0234	11.2378	167

Correlations

		RH_MICRO	TIME	RH
Pearson Correlation	RH_MICRO	1.000	-.290	.910
	TIME	-.290	1.000	-.188
	RH	.910	-.188	1.000
Sig. (1-tailed)	RH_MICRO	.	.000	.000
	TIME	.000	.	.008
	RH	.000	.008	.
N	RH_MICRO	167	167	167
	TIME	167	167	167
	RH	167	167	167

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	RH, TIME[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: RH_MICRO

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.919[a]	.844	.842	5.1501

Model Summary

	Change Statistics				
Model	R Square Change	F Change	df1	df2	Sig. F Change
1	.844	442.483	2	164	.000

a. Predictors: (Constant), RH, TIME

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23472.868	2	11736.434	442.483	.000[a]
	Residual	4349.939	164	26.524		
	Total	27822.807	166			

a. Predictors: (Constant), RH, TIME

b. Dependent Variable: RH_MICRO

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.424	3.433		.124	.902
	TIME	-6.769E-05	.000	-.123	-3.921	.000
	RH	1.022	.036	.887	28.229	.000

Coefficients[a]

Model		95% Confidence Interval for B		Correlations		
		Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	-6.355	7.203			
	TIME	.000	.000	-.290	-.293	-.121
	RH	.951	1.094	.910	.911	.872

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	TIME	.965	1.036
	RH	.965	1.036

a. Dependent Variable: RH_MICRO

Coefficient Correlations[a]

Model			RH	TIME
1	Correlations	RH	1.000	.188
		TIME	.188	1.000
	Covariances	RH	1.311E-03	1.173E-07
		TIME	1.173E-07	2.980E-10

a. Dependent Variable: RH_MICRO

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	TIME	RH
1	1	2.787	1.000	.00	.03	.00
	2	.206	3.677	.01	.89	.01
	3	7.181E-03	19.699	.99	.09	.98

a. Dependent Variable: RH_MICRO

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
TA_RM11	31.8462	.6589	337
DB	31.8096	4.3037	337
WB	27.5428	1.4873	337
RAD	84.2329	112.1790	337
TIME	11:09	7:00	337

Correlations

		TA_RM11	DB	WB	RAD	TIME
Pearson Correlation	TA_RM11	1.000	.251	.059	-.093	.558
	DB	.251	1.000	.888	.882	.326
	WB	.059	.888	1.000	.822	.171
	RAD	-.093	.882	.822	1.000	.070
	TIME	.558	.326	.171	.070	1.000
Sig. (1-tailed)	TA_RM11	.	.000	.139	.044	.000
	DB	.000	.	.000	.000	.000
	WB	.139	.000	.	.000	.001
	RAD	.044	.000	.000	.	.099
	TIME	.000	.000	.001	.099	.
N	TA_RM11	337	337	337	337	337
	DB	337	337	337	337	337
	WB	337	337	337	337	337
	RAD	337	337	337	337	337
	TIME	337	337	337	337	337

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	TIME	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	RAD	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	DB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	WB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: TA_RM11

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.558[a]	.312	.310	.5474
2	.574[b]	.329	.325	.5412
3	.742[c]	.551	.547	.4434
4	.769[d]	.592	.587	.4233

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	.312	151.858	1	335	.000
2	.018	8.732	1	334	.003
3	.222	164.563	1	333	.000
4	.041	33.297	1	332	.000

a. Predictors: (Constant), TIME

b. Predictors: (Constant), TIME, RAD

c. Predictors: (Constant), TIME, RAD, DB

d. Predictors: (Constant), TIME, RAD, DB, WB

ANOVA[e]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45.502	1	45.502	151.858	.000[a]
	Residual	100.378	335	.300		
	Total	145.880	336			
2	Regression	48.059	2	24.030	82.047	.000[b]
	Residual	97.820	334	.293		
	Total	145.880	336			
3	Regression	80.412	3	26.804	136.339	.000[c]
	Residual	65.467	333	.197		
	Total	145.880	336			
4	Regression	86.380	4	21.595	120.496	.000[d]
	Residual	59.500	332	.179		
	Total	145.880	336			

a. Predictors: (Constant), TIME

b. Predictors: (Constant), TIME, RAD

c. Predictors: (Constant), TIME, RAD, DB

d. Predictors: (Constant), TIME, RAD, DB, WB

e. Dependent Variable: TA_RM11

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	31.260	.056		556.678	.000
	TIME	1.459E-05	.000	.558	12.323	.000
2	(Constant)	31.316	.059		533.944	.000
	TIME	1.484E-05	.000	.568	12.641	.000
	RAD	-7.796E-04	.000	-.133	-2.955	.003
3	(Constant)	26.283	.395		66.491	.000
	TIME	6.461E-06	.000	.247	5.558	.000
	RAD	-6.910E-03	.001	-1.176	-13.174	.000
	DB	.185	.014	1.209	12.828	.000
4	(Constant)	29.966	.742		40.410	.000
	TIME	5.048E-06	.000	.193	4.441	.000
	RAD	-6.751E-03	.001	-1.149	-13.462	.000
	DB	.246	.017	1.610	14.161	.000
	WB	-.203	.035	-.458	-5.770	.000

Coefficients[a]

Model		95% Confidence Interval for B		Correlations		
		Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	31.149	31.370			
	TIME	.000	.000	.558	.558	.558
2	(Constant)	31.200	31.431			
	TIME	.000	.000	.558	.569	.566
	RAD	-.001	.000	-.093	-.160	-.132
3	(Constant)	25.505	27.060			
	TIME	.000	.000	.558	.291	.204
	RAD	-.008	-.006	-.093	-.585	-.484
	DB	.157	.213	.251	.575	.471
4	(Constant)	28.507	31.425			
	TIME	.000	.000	.558	.237	.156
	RAD	-.008	-.006	-.093	-.594	-.472
	DB	.212	.281	.251	.614	.496
	WB	-.272	-.134	.059	-.302	-.202

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	TIME	1.000	1.000
2	(Constant)		
	TIME	.995	1.005
	RAD	.995	1.005
3	(Constant)		
	TIME	.681	1.468
	RAD	.169	5.916
	DB	.152	6.586
4	(Constant)		
	TIME	.649	1.540
	RAD	.169	5.934
	DB	.095	10.516
	WB	.195	5.135

a. Dependent Variable: TA_RM11

Excluded Variables[d]

Model		Beta In	t	Sig.	Partial Correlation
1	DB	.078[a]	1.625	.105	.089
	WB	-.037[a]	-.812	.417	-.044
	RAD	-.133[a]	-2.955	.003	-.160
2	DB	1.209[b]	12.828	.000	.575
	WB	.229[b]	2.883	.004	.156
3	WB	-.458[c]	-5.770	.000	-.302

Excluded Variables[d]

Model		Collinearity Statistics		
		Tolerance	VIF	Minimum Tolerance
1	DB	.894	1.119	.894
	WB	.971	1.030	.971
	RAD	.995	1.005	.995
2	DB	.152	6.586	.152
	WB	.311	3.216	.311
3	WB	.195	5.135	9.510E-02

a. Predictors in the Model: (Constant), TIME

b. Predictors in the Model: (Constant), TIME, RAD

c. Predictors in the Model: (Constant), TIME, RAD, DB

d. Dependent Variable: TA_RM11

Coefficient Correlations[a]

Model			TIME	RAD	DB	WB
1	Correlations	TIME	1.000			
	Covariances	TIME	1.403E-12			
2	Correlations	TIME	1.000	-.070		
		RAD	-.070	1.000		
	Covariances	TIME	1.378E-12	-2.175E-11		
		RAD	-2.175E-11	6.961E-08		
3	Correlations	TIME	1.000	.488	-.562	
		RAD	.488	1.000	-.911	
		DB	-.562	-.911	1.000	
	Covariances	TIME	1.351E-12	2.975E-10	-9.420E-09	
		RAD	2.975E-10	2.751E-07	-6.893E-06	
		DB	-9.420E-09	-6.893E-06	2.081E-04	
4	Correlations	TIME	1.000	.464	-.566	.215
		RAD	.464	1.000	-.686	-.055
		DB	-.566	-.686	1.000	-.611
		WB	.215	-.055	-.611	1.000
	Covariances	TIME	1.292E-12	2.644E-10	-1.119E-08	8.615E-09
		RAD	2.644E-10	2.515E-07	-5.991E-06	-9.670E-07
		DB	-1.119E-08	-5.991E-06	3.028E-04	-3.743E-04
		WB	8.615E-09	-9.670E-07	-3.743E-04	1.238E-03

a. Dependent Variable: TA_RM11

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index
1	1	1.847	1.000
	2	.153	3.479
2	1	2.335	1.000
	2	.517	2.125
	3	.149	3.964
3	1	3.292	1.000
	2	.526	2.503
	3	.181	4.265
	4	1.558E-03	45.973
4	1	4.248	1.000
	2	.542	2.799
	3	.208	4.515
	4	1.590E-03	51.681
	5	3.609E-04	108.494

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions				
		(Constant)	TIME	RAD	DB	WB
1	1	.08	.08			
	2	.92	.92			
2	1	.04	.04	.07		
	2	.04	.10	.89		
	3	.92	.85	.04		
3	1	.00	.01	.01	.00	
	2	.00	.05	.16	.00	
	3	.00	.66	.01	.00	
	4	.99	.28	.82	1.00	
4	1	.00	.01	.00	.00	.00
	2	.00	.03	.17	.00	.00
	3	.00	.64	.01	.00	.00
	4	.19	.29	.81	.70	.01
	5	.81	.03	.02	.30	.99

a. Dependent Variable: TA_RM11

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
TA_RM12	31.6411	2.2174	337
DB	31.8096	4.3037	337
WB	27.5428	1.4873	337
RAD	84.2329	112.1790	337
TIME	11:09	7:00	337

Correlations

		TA_RM12	DB	WB	RAD	TIME
Pearson Correlation	TA_RM12	1.000	.898	.691	.678	.483
	DB	.898	1.000	.888	.882	.326
	WB	.691	.888	1.000	.822	.171
	RAD	.678	.882	.822	1.000	.070
	TIME	.483	.326	.171	.070	1.000
Sig. (1-tailed)	TA_RM12	.	.000	.000	.000	.000
	DB	.000	.	.000	.000	.000
	WB	.000	.000	.	.000	.001
	RAD	.000	.000	.000	.	.099
	TIME	.000	.000	.001	.099	.
N	TA_RM12	337	337	337	337	337
	DB	337	337	337	337	337
	WB	337	337	337	337	337
	RAD	337	337	337	337	337
	TIME	337	337	337	337	337

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	DB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	RAD	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	WB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	TIME	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: TA_RM12

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.898[a]	.807	.806	.9756
2	.930[b]	.866	.865	.8153
3	.950[c]	.903	.902	.6938
4	.952[d]	.906	.905	.6840

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	.807	1400.662	1	335	.000
2	.059	145.706	1	334	.000
3	.037	128.192	1	333	.000
4	.003	10.616	1	332	.001

a. Predictors: (Constant), DB

b. Predictors: (Constant), DB, RAD

c. Predictors: (Constant), DB, RAD, WB

d. Predictors: (Constant), DB, RAD, WB, TIME

ANOVA[e]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1333.232	1	1333.232	1400.662	.000[a]
	Residual	318.873	335	.952		
	Total	1652.105	336			
2	Regression	1430.087	2	715.043	1075.699	.000[b]
	Residual	222.018	334	.665		
	Total	1652.105	336			
3	Regression	1491.798	3	497.266	1032.957	.000[c]
	Residual	160.306	333	.481		
	Total	1652.105	336			
4	Regression	1496.765	4	374.191	799.744	.000[d]
	Residual	155.339	332	.468		
	Total	1652.105	336			

a. Predictors: (Constant), DB

b. Predictors: (Constant), DB, RAD

c. Predictors: (Constant), DB, RAD, WB

d. Predictors: (Constant), DB, RAD, WB, TIME

e. Dependent Variable: TA_RM12

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.918	.397		42.618	.000
	DB	.463	.012	.898	37.425	.000
2	(Constant)	10.342	.638		16.214	.000
	DB	.696	.022	1.352	31.742	.000
	RAD	-1.016E-02	.001	-.514	-12.071	.000
3	(Constant)	22.632	1.214		18.648	.000
	DB	.858	.024	1.666	36.500	.000
	RAD	-8.687E-03	.001	-.439	-11.931	.000
	WB	-.638	.056	-.428	-11.322	.000
4	(Constant)	22.838	1.198		19.061	.000
	DB	.806	.028	1.565	28.683	.000
	RAD	-7.462E-03	.001	-.378	-9.209	.000
	WB	-.598	.057	-.401	-10.513	.000
	TIME	5.984E-06	.000	.068	3.258	.001

Coefficients[a]

Model		95% Confidence Interval for B		Correlations		
		Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	16.137	17.699			
	DB	.439	.487	.898	.898	.898
2	(Constant)	9.087	11.597			
	DB	.653	.740	.898	.867	.637
	RAD	-.012	-.009	.678	-.551	-.242
3	(Constant)	20.245	25.019			
	DB	.812	.905	.898	.894	.623
	RAD	-.010	-.007	.678	-.547	-.204
	WB	-.748	-.527	.691	-.527	-.193
4	(Constant)	20.481	25.195			
	DB	.751	.862	.898	.844	.483
	RAD	-.009	-.006	.678	-.451	-.155
	WB	-.710	-.486	.691	-.500	-.177
	TIME	.000	.000	.483	.176	.055

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	DB	1.000	1.000
2	(Constant)		
	DB	.222	4.508
	RAD	.222	4.508
3	(Constant)		
	DB	.140	7.149
	RAD	.215	4.657
	WB	.204	4.897
4	(Constant)		
	DB	.095	10.516
	RAD	.169	5.934
	WB	.195	5.135
	TIME	.649	1.540

a. Dependent Variable: TA_RM12

Excluded Variables[d]

Model		Beta In	t	Sig.	Partial Correlation
1	WB	-.508[a]	-11.464	.000	-.531
	RAD	-.514[a]	-12.071	.000	-.551
	TIME	.213[a]	9.416	.000	.458
2	WB	-.428[b]	-11.322	.000	-.527
	TIME	.115[b]	4.906	.000	.260
3	TIME	.068[c]	3.258	.001	.176

Excluded Variables[d]

Model		Collinearity Statistics		
		Tolerance	VIF	Minimum Tolerance
1	WB	.211	4.740	.211
	RAD	.222	4.508	.222
	TIME	.894	1.119	.894
2	WB	.204	4.897	.140
	TIME	.681	1.468	.152
3	TIME	.649	1.540	9.510E-02

a. Predictors in the Model: (Constant), DB

b. Predictors in the Model: (Constant), DB, RAD

c. Predictors in the Model: (Constant), DB, RAD, WB

d. Dependent Variable: TA_RM12

Coefficient Correlations[a]

Model			DB	RAD	WB	TIME
1	Correlations	DB	1.000			
	Covariances	DB	1.529E-04			
2	Correlations	DB	1.000	-.882		
		RAD	-.882	1.000		
	Covariances	DB	4.815E-04	-1.629E-05		
		RAD	-1.629E-05	7.087E-07		
3	Correlations	DB	1.000	-.580	-.608	
		RAD	-.580	1.000	-.179	
		WB	-.608	-.179	1.000	
	Covariances	DB	5.530E-04	-9.939E-06	-8.050E-04	
		RAD	-9.939E-06	5.302E-07	-7.334E-06	
		WB	-8.050E-04	-7.334E-06	3.172E-03	
4	Correlations	DB	1.000	-.686	-.611	-.566
		RAD	-.686	1.000	-.055	.464
		WB	-.611	-.055	1.000	.215
		TIME	-.566	.464	.215	1.000
	Covariances	DB	7.906E-04	-1.564E-05	-9.772E-04	-2.922E-08
		RAD	-1.564E-05	6.566E-07	-2.524E-06	6.904E-10
		WB	-9.772E-04	-2.524E-06	3.233E-03	2.249E-08
		TIME	-2.922E-08	6.904E-10	2.249E-08	3.373E-12

a. Dependent Variable: TA_RM12

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index
1	1	1.991	1.000
	2	9.002E-03	14.872
2	1	2.535	1.000
	2	.463	2.339
	3	2.163E-03	34.229
3	1	3.488	1.000
	2	.510	2.616
	3	2.271E-03	39.191
	4	3.726E-04	96.751
4	1	4.248	1.000
	2	.542	2.799
	3	.208	4.515
	4	1.590E-03	51.681
	5	3.609E-04	108.494

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions				
		(Constant)	DB	RAD	WB	TIME
1	1	.00	.00			
	2	1.00	1.00			
2	1	.00	.00	.01		
	2	.00	.00	.22		
	3	1.00	1.00	.76		
3	1	.00	.00	.01	.00	
	2	.00	.00	.22	.00	
	3	.13	.72	.70	.01	
	4	.87	.28	.07	.99	
4	1	.00	.00	.00	.00	.01
	2	.00	.00	.17	.00	.03
	3	.00	.00	.01	.00	.64
	4	.19	.70	.81	.01	.29
	5	.81	.30	.02	.99	.03

a. Dependent Variable: TA_RM12

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
TA_RM13	31.5023	3.0007	337
DB	31.8096	4.3037	337
WB	27.5428	1.4873	337
RAD	84.2329	112.1790	337
TIME	11:09	7:00	337

Correlations

		TA_RM13	DB	WB	RAD	TIME
Pearson Correlation	TA_RM13	1.000	.943	.758	.757	.444
	DB	.943	1.000	.888	.882	.326
	WB	.758	.888	1.000	.822	.171
	RAD	.757	.882	.822	1.000	.070
	TIME	.444	.326	.171	.070	1.000
Sig. (1-tailed)	TA_RM13	.	.000	.000	.000	.000
	DB	.000	.	.000	.000	.000
	WB	.000	.000	.	.000	.001
	RAD	.000	.000	.000	.	.099
	TIME	.000	.000	.001	.099	.
N	TA_RM13	337	337	337	337	337
	DB	337	337	337	337	337
	WB	337	337	337	337	337
	RAD	337	337	337	337	337
	TIME	337	337	337	337	337

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	DB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	WB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	RAD	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	TIME	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: TA_RM13

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.943[a]	.890	.889	.9978
2	.959[b]	.920	.919	.8525
3	.968[c]	.937	.936	.7571
4	.969[d]	.939	.938	.7457

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	.890	2703.917	1	335	.000
2	.030	124.889	1	334	.000
3	.017	90.461	1	333	.000
4	.002	11.288	1	332	.001

a. Predictors: (Constant), DB

b. Predictors: (Constant), DB, WB

c. Predictors: (Constant), DB, WB, RAD

d. Predictors: (Constant), DB, WB, RAD, TIME

ANOVA[e]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2691.941	1	2691.941	2703.917	.000[a]
	Residual	333.516	335	.996		
	Total	3025.457	336			
2	Regression	2782.709	2	1391.354	1914.381	.000[b]
	Residual	242.748	334	.727		
	Total	3025.457	336			
3	Regression	2834.565	3	944.855	1648.249	.000[c]
	Residual	190.892	333	.573		
	Total	3025.457	336			
4	Regression	2840.842	4	710.211	1277.201	.000[d]
	Residual	184.615	332	.556		
	Total	3025.457	336			

a. Predictors: (Constant), DB

b. Predictors: (Constant), DB, WB

c. Predictors: (Constant), DB, WB, RAD

d. Predictors: (Constant), DB, WB, RAD, TIME

e. Dependent Variable: TA_RM13

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.582	.406		26.064	.000
	DB	.658	.013	.943	51.999	.000
2	(Constant)	24.108	1.259		19.147	.000
	DB	.891	.024	1.278	37.880	.000
	WB	-.761	.068	-.377	-11.175	.000
3	(Constant)	17.358	1.324		13.107	.000
	DB	1.033	.026	1.481	40.252	.000
	WB	-.656	.061	-.325	-10.679	.000
	RAD	-7.557E-03	.001	-.283	-9.511	.000
4	(Constant)	17.590	1.306		13.467	.000
	DB	.975	.031	1.398	31.796	.000
	WB	-.611	.062	-.303	-9.865	.000
	RAD	-6.180E-03	.001	-.231	-6.996	.000
	TIME	6.727E-06	.000	.057	3.360	.001

Coefficients[a]

Model		95% Confidence Interval for B		Correlations		
		Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	9.783	11.380			
	DB	.633	.683	.943	.943	.943
2	(Constant)	21.631	26.585			
	DB	.845	.938	.943	.901	.587
	WB	-.895	-.627	.758	-.522	-.173
3	(Constant)	14.753	19.964			
	DB	.982	1.083	.943	.911	.554
	WB	-.777	-.535	.758	-.505	-.147
	RAD	-.009	-.006	.757	-.462	-.131
4	(Constant)	15.021	20.160			
	DB	.914	1.035	.943	.868	.431
	WB	-.733	-.490	.758	-.476	-.134
	RAD	-.008	-.004	.757	-.358	-.095
	TIME	.000	.000	.444	.181	.046

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	DB	1.000	1.000
2	(Constant)		
	DB	.211	4.740
	WB	.211	4.740
3	(Constant)		
	DB	.140	7.149
	WB	.204	4.897
	RAD	.215	4.657
4	(Constant)		
	DB	.095	10.516
	WB	.195	5.135
	RAD	.169	5.934
	TIME	.649	1.540

a. Dependent Variable: TA_RM13

Excluded Variables[d]

Model		Beta In	t	Sig.	Partial Correlation
1	WB	-.377[a]	-11.175	.000	-.522
	RAD	-.339[a]	-10.034	.000	-.481
	TIME	.153[a]	8.829	.000	.435
2	RAD	-.283[b]	-9.511	.000	-.462
	TIME	.111[b]	6.971	.000	.357
3	TIME	.057[c]	3.360	.001	.181

Excluded Variables[d]

Model		Collinearity Statistics		
		Tolerance	VIF	Minimum Tolerance
1	WB	.211	4.740	.211
	RAD	.222	4.508	.222
	TIME	.894	1.119	.894
2	RAD	.215	4.657	.140
	TIME	.828	1.208	.180
3	TIME	.649	1.540	9.510E-02

a. Predictors in the Model: (Constant), DB

b. Predictors in the Model: (Constant), DB, WB

c. Predictors in the Model: (Constant), DB, WB, RAD

d. Dependent Variable: TA_RM13

Coefficient Correlations[a]

Model			DB	WB	RAD	TIME
1	Correlations	DB	1.000			
	Covariances	DB	1.600E-04			
2	Correlations	DB	1.000	-.888		
		WB	-.888	1.000		
	Covariances	DB	5.536E-04	-1.423E-03		
		WB	-1.423E-03	4.635E-03		
3	Correlations	DB	1.000	-.608	-.580	
		WB	-.608	1.000	-.179	
		RAD	-.580	-.179	1.000	
	Covariances	DB	6.585E-04	-9.586E-04	-1.184E-05	
		WB	-9.586E-04	3.777E-03	-8.734E-06	
		RAD	-1.184E-05	-8.734E-06	6.313E-07	
4	Correlations	DB	1.000	-.611	-.686	-.566
		WB	-.611	1.000	-.055	.215
		RAD	-.686	-.055	1.000	.464
		TIME	-.566	.215	.464	1.000
	Covariances	DB	9.396E-04	-1.161E-03	-1.859E-05	-3.472E-08
		WB	-1.161E-03	3.842E-03	-3.000E-06	2.673E-08
		RAD	-1.859E-05	-3.000E-06	7.804E-07	8.205E-10
		TIME	-3.472E-08	2.673E-08	8.205E-10	4.008E-12

a. Dependent Variable: TA_RM13

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index
1	1	1.991	1.000
	2	9.002E-03	14.872
2	1	2.990	1.000
	2	9.261E-03	17.970
	3	3.958E-04	86.918
3	1	3.488	1.000
	2	.510	2.616
	3	2.271E-03	39.191
	4	3.726E-04	96.751
4	1	4.248	1.000
	2	.542	2.799
	3	.208	4.515
	4	1.590E-03	51.681
	5	3.609E-04	108.494

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions				
		(Constant)	DB	WB	RAD	TIME
1	1	.00	.00			
	2	1.00	1.00			
2	1	.00	.00	.00		
	2	.06	.24	.00		
	3	.94	.76	1.00		
3	1	.00	.00	.00	.01	
	2	.00	.00	.00	.22	
	3	.13	.72	.01	.70	
	4	.87	.28	.99	.07	
4	1	.00	.00	.00	.00	.01
	2	.00	.00	.00	.17	.03
	3	.00	.00	.00	.01	.64
	4	.19	.70	.01	.81	.29
	5	.81	.30	.99	.02	.03

a. Dependent Variable: TA_RM13

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
TA_RM21	30.7344	1.8998	340
DB	31.3097	4.0479	340
WB	27.7525	1.3284	340
RAD	85.0294	110.1314	340
T_SOIL	31.2398	1.5923	340
VENT	.66	.48	340
TOP_W	.36	.48	340
TIME	11:01	6:47	340

Correlations

		TA_RM21	DB	WB	RAD
Pearson Correlation	TA_RM21	1.000	.812	.587	.312
	DB	.812	1.000	.904	.719
	WB	.587	.904	1.000	.760
	RAD	.312	.719	.760	1.000
	T_SOIL	.864	.495	.231	-.050
	VENT	-.109	-.536	-.665	-.698
	TOP_W	.417	.004	-.207	-.229
	TIME	.339	.343	.345	.099
Sig. (1-tailed)	TA_RM21	.	.000	.000	.000
	DB	.000	.	.000	.000
	WB	.000	.000	.	.000
	RAD	.000	.000	.000	.
	T_SOIL	.000	.000	.000	.177
	VENT	.022	.000	.000	.000
	TOP_W	.000	.468	.000	.000
	TIME	.000	.000	.000	.034
N	TA_RM21	340	340	340	340
	DB	340	340	340	340
	WB	340	340	340	340
	RAD	340	340	340	340
	T_SOIL	340	340	340	340
	VENT	340	340	340	340
	TOP_W	340	340	340	340
	TIME	340	340	340	340

Correlations

		T_SOIL	VENT	TOP_W	TIME
Pearson Correlation	TA_RM21	.864	-.109	.417	.339
	DB	.495	-.536	.004	.343
	WB	.231	-.665	-.207	.345
	RAD	-.050	-.698	-.229	.099
	T_SOIL	1.000	.166	.675	.208
	VENT	.166	1.000	.545	-.098
	TOP_W	.675	.545	1.000	-.110
	TIME	.208	-.098	-.110	1.000
Sig. (1-tailed)	TA_RM21	.000	.022	.000	.000
	DB	.000	.000	.468	.000
	WB	.000	.000	.000	.000
	RAD	.177	.000	.000	.034
	T_SOIL	.	.001	.000	.000
	VENT	.001	.	.000	.036
	TOP_W	.000	.000	.	.021
	TIME	.000	.036	.021	.
N	TA_RM21	340	340	340	340
	DB	340	340	340	340
	WB	340	340	340	340
	RAD	340	340	340	340
	T_SOIL	340	340	340	340
	VENT	340	340	340	340
	TOP_W	340	340	340	340
	TIME	340	340	340	340

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	T_SOIL	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	DB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	VENT	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	TOP_W	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: TA_RM21

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.864[a]	.746	.745	.9593
2	.970[b]	.942	.941	.4598
3	.975[c]	.950	.950	.4258
4	.975[d]	.951	.951	.4213

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	.746	991.547	1	338	.000
2	.196	1134.624	1	337	.000
3	.008	56.887	1	336	.000
4	.001	8.233	1	335	.004

a. Predictors: (Constant), T_SOIL

b. Predictors: (Constant), T_SOIL, DB

c. Predictors: (Constant), T_SOIL, DB, VENT

d. Predictors: (Constant), T_SOIL, DB, VENT, TOP_W

ANOVA[e]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	912.528	1	912.528	991.547	.000[a]
	Residual	311.064	338	.920		
	Total	1223.592	339			
2	Regression	1152.359	2	576.179	2725.868	.000[b]
	Residual	71.233	337	.211		
	Total	1223.592	339			
3	Regression	1162.673	3	387.558	2137.573	.000[c]
	Residual	60.919	336	.181		
	Total	1223.592	339			
4	Regression	1164.134	4	291.034	1639.752	.000[d]
	Residual	59.458	335	.177		
	Total	1223.592	339			

a. Predictors: (Constant), T_SOIL

b. Predictors: (Constant), T_SOIL, DB

c. Predictors: (Constant), T_SOIL, DB, VENT

d. Predictors: (Constant), T_SOIL, DB, VENT, TOP_W

e. Dependent Variable: TA_RM21

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.454	1.024		-1.420	.156
	T_SOIL	1.030	.033	.864	31.489	.000
2	(Constant)	.466	.494		.944	.346
	T_SOIL	.729	.018	.611	40.394	.000
	DB	.239	.007	.510	33.684	.000
3	(Constant)	1.361	.473		2.881	.004
	T_SOIL	.637	.021	.534	30.822	.000
	DB	.291	.010	.620	30.615	.000
	VENT	.537	.071	.135	7.542	.000
4	(Constant)	2.678E-04	.666		.000	1.000
	T_SOIL	.686	.027	.575	25.803	.000
	DB	.287	.010	.611	30.138	.000
	VENT	.620	.076	.155	8.142	.000
	TOP_W	-.233	.081	-.059	-2.869	.004

Coefficients[a]

Model		95% Confidence Interval for B		Correlations		
		Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	-3.467	.559			
	T_SOIL	.966	1.095	.864	.864	.864
2	(Constant)	-.505	1.437			
	T_SOIL	.694	.765	.864	.910	.531
	DB	.225	.253	.812	.878	.443
3	(Constant)	.432	2.291			
	T_SOIL	.597	.678	.864	.859	.375
	DB	.272	.310	.812	.858	.373
	VENT	.397	.677	-.109	.381	.092
4	(Constant)	-1.310	1.310			
	T_SOIL	.634	.738	.864	.816	.311
	DB	.268	.305	.812	.855	.363
	VENT	.470	.769	-.109	.406	.098
	TOP_W	-.393	-.073	.417	-.155	-.035

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	T_SOIL	1.000	1.000
2	(Constant)		
	T_SOIL	.755	1.325
	DB	.755	1.325
3	(Constant)		
	T_SOIL	.493	2.027
	DB	.361	2.767
	VENT	.466	2.147
4	(Constant)		
	T_SOIL	.292	3.424
	DB	.353	2.833
	VENT	.399	2.503
	TOP_W	.343	2.917

a. Dependent Variable: TA_RM21

Excluded Variables[c]

Model		Beta In	t	Sig.	Partial Correlation
1	DB	.510[a]	33.684	.000	.878
	WB	.410[a]	23.671	.000	.790
	RAD	.356[a]	18.296	.000	.706
	VENT	-.260[a]	-10.821	.000	-.508
	TOP_W	-.306[a]	-9.194	.000	-.448
	TIME	.167[a]	6.293	.000	.324
2	WB	-.120[b]	-3.219	.001	-.173
	RAD	-.088[b]	-3.520	.000	-.189
	VENT	.135[b]	7.542	.000	.381
	TOP_W	.004[b]	.200	.841	.011
	TIME	.043[b]	3.084	.002	.166
3	WB	-.060[c]	-1.679	.094	-.091
	RAD	-.050[c]	-2.067	.040	-.112
	TOP_W	-.059[c]	-2.869	.004	-.155
	TIME	.033[c]	2.565	.011	.139
4	WB	-.059[d]	-1.667	.096	-.091
	RAD	-.018[d]	-.624	.533	-.034
	TIME	.024[d]	1.782	.076	.097

Excluded Variables[e]

Model		Collinearity Statistics		
		Tolerance	VIF	Minimum Tolerance
1	DB	.755	1.325	.755
	WB	.947	1.056	.947
	RAD	.997	1.003	.997
	VENT	.972	1.028	.972
	TOP_W	.544	1.838	.544
	TIME	.957	1.045	.957
2	WB	.121	8.241	9.675E-02
	RAD	.265	3.774	.200
	VENT	.466	2.147	.361
	TOP_W	.400	2.502	.302
	TIME	.881	1.136	.694
3	WB	.114	8.740	9.448E-02
	RAD	.251	3.985	.179
	TOP_W	.343	2.917	.292
	TIME	.872	1.147	.336
4	WB	.114	8.741	9.375E-02
	RAD	.177	5.637	.133
	TIME	.790	1.267	.282

a. Predictors in the Model: (Constant), T_SOIL

b. Predictors in the Model: (Constant), T_SOIL, DB

c. Predictors in the Model: (Constant), T_SOIL, DB, VENT

d. Predictors in the Model: (Constant), T_SOIL, DB, VENT, TOP_W

e. Dependent Variable: TA_RM21

Coefficient Correlations[a]

Model			T_SOIL	DB	VENT	TOP_W
1	Correlations	T_SOIL	1.000			
	Covariances	T_SOIL	1.071E-03			
2	Correlations	T_SOIL	1.000	-.495		
		DB	-.495	1.000		
	Covariances	T_SOIL	3.259E-04	-6.349E-05		
		DB	-6.349E-05	5.042E-05		
3	Correlations	T_SOIL	1.000	-.702	-.589	
		DB	-.702	1.000	.722	
		VENT	-.589	.722	1.000	
	Covariances	T_SOIL	4.276E-04	-1.379E-04	-8.668E-04	
		DB	-1.379E-04	9.030E-05	4.885E-04	
		VENT	-8.668E-04	4.885E-04	5.073E-03	
4	Correlations	T_SOIL	1.000	-.632	-.178	-.639
		DB	-.632	1.000	.603	.153
		VENT	-.178	.603	1.000	-.377
		TOP_W	-.639	.153	-.377	1.000
	Covariances	T_SOIL	7.071E-04	-1.598E-04	-3.610E-04	-1.379E-03
		DB	-1.598E-04	9.052E-05	4.364E-04	1.184E-04
		VENT	-3.610E-04	4.364E-04	5.790E-03	-2.331E-03
		TOP_W	-1.379E-03	1.184E-04	-2.331E-03	6.595E-03

a. Dependent Variable: TA_RM21

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index
1	1	1.999	1.000
	2	1.293E-03	39.321
2	1	2.989	1.000
	2	9.401E-03	17.833
	3	1.137E-03	51.269
3	1	3.694	1.000
	2	.299	3.513
	3	5.531E-03	25.845
	4	8.376E-04	66.413
4	1	4.205	1.000
	2	.589	2.673
	3	.202	4.567
	4	4.821E-03	29.532
	5	4.661E-04	94.977

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions				
		(Constant)	T_SOIL	DB	VENT	TOP_W
1	1	:00	.00			
	2	1.00	1.00			
2	1	.00	.00	.00		
	2	.07	.02	.86		
	3	.93	.98	.14		
3	1	.00	.00	.00	.01	
	2	.00	.00	.00	.42	
	3	.17	.01	.60	.29	
	4	.83	.99	.40	.28	
4	1	.00	.00	.00	.01	.01
	2	.00	.00	.00	.02	.24
	3	.00	.00	.00	.48	.24
	4	.08	.01	.70	.48	.07
	5	.92	.99	.29	.01	.45

[a]. Dependent Variable: TA_RM21

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
TA_RM22	30.6942	1.8696	340
DB	31.3097	4.0479	340
WB	27.7525	1.3284	340
RAD	85.0294	110.1314	340
VENT	.66	.48	340
TOP_W	.36	.48	340
TIME	11:01	6:47	340

Correlations

		TA_RM22	DB	WB	RAD
Pearson Correlation	TA_RM22	1.000	.818	.593	.362
	DB	.818	1.000	.904	.719
	WB	.593	.904	1.000	.760
	RAD	.362	.719	.760	1.000
	VENT	-.090	-.536	-.665	-.698
	TOP_W	.420	.004	-.207	-.229
	TIME	.370	.343	.345	.099
Sig. (1-tailed)	TA_RM22	.	.000	.000	.000
	DB	.000	.	.000	.000
	WB	.000	.000	.	.000
	RAD	.000	.000	.000	.
	VENT	.050	.000	.000	.000
	TOP_W	.000	.468	.000	.000
	TIME	.000	.000	.000	.034
N	TA_RM22	340	340	340	340
	DB	340	340	340	340
	WB	340	340	340	340
	RAD	340	340	340	340
	VENT	340	340	340	340
	TOP_W	340	340	340	340
	TIME	340	340	340	340

Correlations

		VENT	TOP_W	TIME
Pearson Correlation	TA_RM22	-.090	.420	.370
	DB	-.536	.004	.343
	WB	-.665	-.207	.345
	RAD	-.698	-.229	.099
	VENT	1.000	.545	-.098
	TOP_W	.545	1.000	-.110
	TIME	-.098	-.110	1.000
Sig. (1-tailed)	TA_RM22	.050	.000	.000
	DB	.000	.468	.000
	WB	.000	.000	.000
	RAD	.000	.000	.034
	VENT	.	.000	.036
	TOP_W	.000	.	.021
	TIME	.036	.021	.
N	TA_RM22	340	340	340
	DB	340	340	340
	WB	340	340	340
	RAD	340	340	340
	VENT	340	340	340
	TOP_W	340	340	340
	TIME	340	340	340

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	DB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	TOP_W	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	RAD	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	VENT	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
5	WB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
6	TIME	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: TA_RM22

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.818[a]	.668	.667	1.0781
2	.917[b]	.842	.841	.7462
3	.938[c]	.880	.879	.6492
4	.945[d]	.893	.892	.6147
5	.949[e]	.901	.900	.5921
6	.954[f]	.910	.908	.5667

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	.668	681.355	1	338	.000
2	.173	368.584	1	337	.000
3	.039	109.209	1	336	.000
4	.013	39.740	1	335	.000
5	.008	27.066	1	334	.000
6	.009	31.603	1	333	.000

a. Predictors: (Constant), DB

b. Predictors: (Constant), DB, TOP_W

c. Predictors: (Constant), DB, TOP_W, RAD

d. Predictors: (Constant), DB, TOP_W, RAD, VENT

e. Predictors: (Constant), DB, TOP_W, RAD, VENT, WB

f. Predictors: (Constant), DB, TOP_W, RAD, VENT, WB, TIME

ANOVA[g]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	792.005	1	792.005	681.355	.000[a]
	Residual	392.890	338	1.162		
	Total	1184.895	339			
2	Regression	997.243	2	498.622	895.465	.000[b]
	Residual	187.652	337	.557		
	Total	1184.895	339			
3	Regression	1043.274	3	347.758	825.067	.000[c]
	Residual	141.621	336	.421		
	Total	1184.895	339			
4	Regression	1058.292	4	264.573	700.081	.000[d]
	Residual	126.602	335	.378		
	Total	1184.895	339			
5	Regression	1067.783	5	213.557	609.057	.000[e]
	Residual	117.112	334	.351		
	Total	1184.895	339			
6	Regression	1077.934	6	179.656	559.319	.000[f]
	Residual	106.961	333	.321		
	Total	1184.895	339			

a. Predictors: (Constant), DB

b. Predictors: (Constant), DB, TOP_W

c. Predictors: (Constant), DB, TOP_W, RAD

d. Predictors: (Constant), DB, TOP_W, RAD, VENT

e. Predictors: (Constant), DB, TOP_W, RAD, VENT, WB

f. Predictors: (Constant), DB, TOP_W, RAD, VENT, WB, TIME

g. Dependent Variable: TA_RM22

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.872	.457		41.323	.000
	DB	.378	.014	.818	26.103	.000
2	(Constant)	18.313	.317		57.695	.000
	DB	.377	.010	.816	37.629	.000
	TOP_W	1.617	.084	.416	19.199	.000
3	(Constant)	15.717	.371		42.313	.000
	DB	.477	.013	1.032	36.855	.000
	TOP_W	1.346	.078	.347	17.322	.000
	RAD	-5.103E-03	.000	-.301	-10.450	.000
4	(Constant)	14.573	.396		36.823	.000
	DB	.497	.013	1.076	39.237	.000
	TOP_W	1.007	.091	.259	11.038	.000
	RAD	-3.666E-03	.001	-.216	-7.110	.000
	VENT	.768	.122	.195	6.304	.000
5	(Constant)	21.693	1.421		15.271	.000
	DB	.587	.021	1.272	27.679	.000
	TOP_W	.883	.091	.227	9.706	.000
	RAD	-3.261E-03	.001	-.192	-6.488	.000
	VENT	.654	.119	.166	5.475	.000
	WB	-.355	.068	-.253	-5.203	.000
6	(Constant)	23.436	1.395		16.806	.000
	DB	.568	.021	1.229	27.529	.000
	TOP_W	.989	.089	.255	11.098	.000
	RAD	-2.649E-03	.000	-.156	-5.372	.000
	VENT	.546	.116	.139	4.718	.000
	WB	-.408	.066	-.290	-6.179	.000
	TIME	8.075E-06	.000	.106	5.622	.000

Coefficients[a]

Model		95% Confidence Interval for B		Correlations		
		Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	17.973	19.770			
	DB	.349	.406	.818	.818	.818
2	(Constant)	17.689	18.938			
	DB	.357	.396	.818	.899	.816
	TOP_W	1.451	1.783	.420	.723	.416
3	(Constant)	14.987	16.448			
	DB	.451	.502	.818	.895	.695
	TOP_W	1.193	1.499	.420	.687	.327
	RAD	-.006	-.004	.362	-.495	-.197
4	(Constant)	13.795	15.352			
	DB	.472	.522	.818	.906	.701
	TOP_W	.827	1.186	.420	.516	.197
	RAD	-.005	-.003	.362	-.362	-.127
	VENT	.528	1.008	-.090	.326	.113
5	(Constant)	18.898	24.487			
	DB	.546	.629	.818	.835	.476
	TOP_W	.704	1.062	.420	.469	.167
	RAD	-.004	-.002	.362	-.335	-.112
	VENT	.419	.888	-.090	.287	.094
	WB	-.490	-.221	.593	-.274	-.089
6	(Constant)	20.693	26.179			
	DB	.527	.608	.818	.834	.453
	TOP_W	.814	1.164	.420	.520	.183
	RAD	-.004	-.002	.362	-.282	-.088
	VENT	.319	.774	-.090	.250	.078
	WB	-.538	-.278	.593	-.321	-.102
	TIME	.000	.000	.370	.294	.093

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	DB	1.000	1.000
2	(Constant)		
	DB	1.000	1.000
	TOP_W	1.000	1.000
3	(Constant)		
	DB	.454	2.204
	TOP_W	.889	1.125
	RAD	.430	2.326
4	(Constant)		
	DB	.424	2.359
	TOP_W	.579	1.728
	RAD	.346	2.891
	VENT	.332	3.013
5	(Constant)		
	DB	.140	7.136
	TOP_W	.539	1.854
	RAD	.338	2.962
	VENT	.321	3.119
	WB	.126	7.961
6	(Constant)		
	DB	.136	7.352
	TOP_W	.515	1.940
	RAD	.321	3.114
	VENT	.312	3.205
	WB	.123	8.125
	TIME	.769	1.300

a. Dependent Variable: TA_RM22

Excluded Variables[f]

Model		Beta In	t	Sig.	Partial Correlation
1	WB	-.794[a]	-13.425	.000	-.590
	RAD	-.467[a]	-12.525	.000	-.564
	VENT	.489[a]	18.913	.000	.718
	TOP_W	.416[a]	19.199	.000	.723
	TIME	.101[a]	3.080	.002	.165
2	WB	-.416[b]	-7.760	.000	-.390
	RAD	-.301[b]	-10.450	.000	-.495
	VENT	.293[b]	9.834	.000	.473
	TIME	.156[b]	7.216	.000	.366
3	WB	-.301[c]	-6.061	.000	-.314
	VENT	.195[c]	6.304	.000	.326
	TIME	.105[c]	5.166	.000	.272
4	WB	-.253[d]	-5.203	.000	-.274
	TIME	.089[d]	4.547	.000	.241
5	TIME	.106[e]	5.622	.000	.294

Excluded Variables[f]

Model		Collinearity Statistics		
		Tolerance	VIF	Minimum Tolerance
1	WB	.183	5.452	.183
	RAD	.484	2.068	.484
	VENT	.713	1.403	.713
	TOP_W	1.000	1.000	1.000
	TIME	.882	1.133	.882
2	WB	.139	7.196	.139
	RAD	.430	2.326	.430
	VENT	.413	2.424	.413
	TIME	.870	1.149	.870
3	WB	.130	7.691	.130
	VENT	.332	3.013	.332
	TIME	.800	1.249	.370
4	WB	.126	7.961	.126
	TIME	.785	1.274	.325
5	TIME	.769	1.300	.123

a. Predictors in the Model: (Constant), DB

b. Predictors in the Model: (Constant), DB, TOP_W

c. Predictors in the Model: (Constant), DB, TOP_W, RAD

d. Predictors in the Model: (Constant), DB, TOP_W, RAD, VENT

e. Predictors in the Model: (Constant), DB, TOP_W, RAD, VENT, WB

f. Dependent Variable: TA_RM22

Coefficient Correlations[a]

Model			DB	TOP_W	RAD	VENT
1	Correlations	DB	1.000			
	Covariances	DB	2.093E-04			
2	Correlations	DB	1.000	-.004		
		TOP_W	-.004	1.000		
	Covariances	DB	1.002E-04	-3.732E-06		
		TOP_W	-3.732E-06	7.093E-03		
3	Correlations	DB	1.000	-.249	-.739	
		TOP_W	-.249	1.000	.333	
		RAD	-.739	.333	1.000	
	Covariances	DB	1.673E-04	-2.504E-04	-4.668E-06	
		TOP_W	-2.504E-04	6.040E-03	1.265E-05	
		RAD	-4.668E-06	1.265E-05	2.384E-07	
4	Correlations	DB	1.000	-.346	-.527	.256
		TOP_W	-.346	1.000	-.020	-.591
		RAD	-.527	-.020	1.000	.442
		VENT	.256	-.591	.442	1.000
	Covariances	DB	1.605E-04	-3.995E-04	-3.445E-06	3.955E-04
		TOP_W	-3.995E-04	8.318E-03	-9.416E-07	-6.562E-03
		RAD	-3.445E-06	-9.416E-07	2.658E-07	2.777E-05
		VENT	3.955E-04	-6.562E-03	2.777E-05	1.484E-02
5	Correlations	DB	1.000	-.405	-.173	-.006
		TOP_W	-.405	1.000	-.059	-.513
		RAD	-.173	-.059	1.000	.401
		VENT	-.006	-.513	.401	1.000
		WB	-.818	.261	-.155	.184
	Covariances	DB	4.505E-04	-7.826E-04	-1.846E-06	-1.454E-05
		TOP_W	-7.826E-04	8.280E-03	-2.719E-06	-5.567E-03
		RAD	-1.846E-06	-2.719E-06	2.526E-07	2.406E-05
		VENT	-1.454E-05	-5.567E-03	2.406E-05	1.425E-02
		WB	-1.186E-03	1.621E-03	-5.312E-06	1.501E-03
6	Correlations	DB	1.000	-.426	-.204	.023
		TOP_W	-.426	1.000	-.010	-.529
		RAD	-.204	-.010	1.000	.349
		VENT	.023	-.529	.349	1.000
		WB	-.774	.222	-.181	.203
		TIME	-.171	.211	.221	-.165
	Covariances	DB	4.251E-04	-7.833E-04	-2.075E-06	5.397E-05
		TOP_W	-7.833E-04	7.938E-03	-4.474E-07	-5.458E-03
		RAD	-2.075E-06	-4.474E-07	2.432E-07	1.997E-05
		VENT	5.397E-05	-5.458E-03	1.997E-05	1.342E-02
		WB	-1.054E-03	1.309E-03	-5.886E-06	1.553E-03
		TIME	-5.073E-09	2.697E-08	1.563E-10	-2.737E-08

Coefficient Correlations[a]

Model			WB	TIME
1	Correlations	DB		
	Covariances	DB		
2	Correlations	DB		
		TOP_W		
	Covariances	DB		
		TOP_W		
3	Correlations	DB		
		TOP_W		
		RAD		
	Covariances	DB		
		TOP_W		
		RAD		
4	Correlations	DB		
		TOP_W		
		RAD		
		VENT		
	Covariances	DB		
		TOP_W		
		RAD		
		VENT		
5	Correlations	DB	-.818	
		TOP_W	.261	
		RAD	-.155	
		VENT	.184	
		WB	1.000	
	Covariances	DB	-1.186E-03	
		TOP_W	1.621E-03	
		RAD	-5.312E-06	
		VENT	1.501E-03	
		WB	4.666E-03	
6	Correlations	DB	-.774	-.171
		TOP_W	.222	.211
		RAD	-.181	.221
		VENT	.203	-.165
		WB	1.000	-.142
		TIME	-.142	1.000
	Covariances	DB	-1.054E-03	-5.073E-09
		TOP_W	1.309E-03	2.697E-08
		RAD	-5.886E-06	1.563E-10
		VENT	1.553E-03	-2.737E-08
		WB	4.362E-03	-1.347E-08
		TIME	-1.347E-08	2.063E-12

a. Dependent Variable: TA_RM22

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index
1	1	1.992	1.000
	2	8.230E-03	15.557
2	1	2.478	1.000
	2	.514	2.195
	3	8.214E-03	17.368
3	1	2.911	1.000
	2	.779	1.933
	3	.306	3.085
	4	4.059E-03	26.780
4	1	3.560	1.000
	2	.998	1.889
	3	.369	3.107
	4	6.932E-02	7.167
	5	3.540E-03	31.715
5	1	4.514	1.000
	2	1.011	2.113
	3	.394	3.385
	4	7.643E-02	7.685
	5	3.762E-03	34.641
	6	1.780E-04	159.266
6	1	5.258	1.000
	2	1.029	2.261
	3	.435	3.477
	4	.201	5.116
	5	7.439E-02	8.407
	6	3.178E-03	40.674
	7	1.737E-04	173.982

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions			
		(Constant)	DB	TOP_W	RAD
1	1	.00	.00		
	2	1.00	1.00		
2	1	.00	.00	.06	
	2	.00	.00	.93	
	3	.99	.99	.00	
3	1	.00	.00	.03	.02
	2	.00	.00	.40	.15
	3	.01	.00	.52	.32
	4	.99	1.00	.05	.51
4	1	.00	.00	.02	.01
	2	.00	.00	.08	.12
	3	.00	.00	.60	.08
	4	.01	.02	.16	.61
	5	.98	.98	.14	.19
5	1	.00	.00	.01	.00
	2	.00	.00	.08	.11
	3	.00	.00	.53	.10
	4	.00	.00	.19	.57
	5	.04	.38	.14	.19
	6	.95	.62	.06	.03
6	1	.00	.00	.01	.00
	2	.00	.00	.09	.09
	3	.00	.00	.39	.12
	4	.00	.00	.14	.00
	5	.00	.00	.15	.53
	6	.05	.45	.19	.22
	7	.95	.54	.04	.04

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions		
		VENT	WB	TIME
1	1			
	2			
2	1			
	2			
	3			
3	1			
	2			
	3			
	4			
4	1	.01		
	2	.02		
	3	.03		
	4	.80		
	5	.13		
5	1	.00	.00	
	2	.02	.00	
	3	.02	.00	
	4	.79	.00	
	5	.11	.00	
	6	.05	1.00	
6	1	.00	.00	.01
	2	.02	.00	.00
	3	.01	.00	.07
	4	.04	.00	.71
	5	.74	.00	.03
	6	.12	.00	.15
	7	.06	1.00	.02

a. Dependent Variable: TA_RM22

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
TA_RM21	31.4217	2.0472	727
DB	31.8000	4.1273	727
WB	27.7791	1.3875	727
RAD	89.8649	113.2940	727
TIME	11:40	6:47	727
T_SOIL	31.8740	1.4695	727
VENT	.69	.46	727
TOP_W	.58	.49	727
IN_H_G	38.9546	88.5575	727

Correlations

		TA_RM21	DB	WB	RAD
Pearson Correlation	TA_RM21	1.000	.861	.673	.512
	DB	.861	1.000	.891	.779
	WB	.673	.891	1.000	.769
	RAD	.512	.779	.769	1.000
	TIME	.366	.314	.256	.033
	T_SOIL	.835	.526	.294	.105
	VENT	-.183	-.508	-.540	.578
	TOP_W	.090	-.179	-.286	-.238
	IN_H_G	.519	.518	.474	.536
Sig. (1-tailed)	TA_RM21	.	.000	.000	.000
	DB	.000	.	.000	.000
	WB	.000	.000	.	.000
	RAD	.000	.000	.000	.
	TIME	.000	.000	.000	.188
	T_SOIL	.000	.000	.000	.002
	VENT	.000	.000	.000	.000
	TOP_W	.008	.000	.000	.000
	IN_H_G	.000	.000	.000	.000
N	TA_RM21	727	727	727	727
	DB	727	727	727	727
	WB	727	727	727	727
	RAD	727	727	727	727
	TIME	727	727	727	727
	T_SOIL	727	727	727	727
	VENT	727	727	727	727
	TOP_W	727	727	727	727
	IN_H_G	727	727	727	727

Correlations

		TIME	T_SOIL	VENT
Pearson Correlation	TA_RM21	.366	.835	-.183
	DB	.314	.526	-.508
	WB	.256	.294	-.540
	RAD	.033	.105	-.578
	TIME	1.000	.330	-.057
	T_SOIL	.330	1.000	.157
	VENT	-.057	.157	1.000
	TOP_W	-.023	.368	.413
	IN_H_G	.019	.288	-.210
Sig. (1-tailed)	TA_RM21	.000	.000	.000
	DB	.000	.000	.000
	WB	.000	.000	.000
	RAD	.188	.002	.000
	TIME	.	.000	.064
	T_SOIL	.000	.	.000
	VENT	.064	.000	.
	TOP_W	.270	.000	.000
	IN_H_G	.303	.000	.000
N	TA_RM21	727	727	727
	DB	727	727	727
	WB	727	727	727
	RAD	727	727	727
	TIME	727	727	727
	T_SOIL	727	727	727
	VENT	727	727	727
	TOP_W	727	727	727
	IN_H_G	727	727	727

Correlations

		TOP_W	IN_H_G
Pearson Correlation	TA_RM21	.090	.519
	DB	-.179	.518
	WB	-.286	.474
	RAD	-.238	.536
	TIME	-.023	.019
	T_SOIL	.368	.288
	VENT	.413	-.210
	TOP_W	1.000	-.047
	IN_H_G	-.047	1.000
Sig. (1-tailed)	TA_RM21	.008	.000
	DB	.000	.000
	WB	.000	.000
	RAD	.000	.000
	TIME	.270	.303
	T_SOIL	.000	.000
	VENT	.000	.000
	TOP_W	.	.105
	IN_H_G	.105	.
N	TA_RM21	727	727
	DB	727	727
	WB	727	727
	RAD	727	727
	TIME	727	727
	T_SOIL	727	727
	VENT	727	727
	TOP_W	727	727
	IN_H_G	727	727

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	DB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	T_SOIL	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	IN_H_G	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	VENT	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
5	TIME	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: TA_RM21

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.861[a]	.741	.741	1.0421
2	.971[b]	.943	.943	.4875
3	.974[c]	.949	.949	.4624
4	.975[d]	.951	.950	.4563
5	.975[e]	.951	.951	.4543

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	.741	2076.642	1	725	.000
2	.202	2589.323	1	724	.000
3	.006	81.646	1	723	.000
4	.001	20.597	1	722	.000
5	.000	7.312	1	721	.007

a. Predictors: (Constant), DB

b. Predictors: (Constant), DB, T_SOIL

c. Predictors: (Constant), DB, T_SOIL, IN_H_G

d. Predictors: (Constant), DB, T_SOIL, IN_H_G, VENT

e. Predictors: (Constant), DB, T_SOIL, IN_H_G, VENT, TIME

ANOVA[f]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2255.321	1	2255.321	2076.642	.000[a]
	Residual	787.381	725	1.086		
	Total	3042.702	726			
2	Regression	2870.650	2	1435.325	6039.893	.000[b]
	Residual	172.052	724	.238		
	Total	3042.702	726			
3	Regression	2888.107	3	962.702	4502.331	.000[c]
	Residual	154.594	723	.214		
	Total	3042.702	726			
4	Regression	2892.395	4	723.099	3473.426	.000[d]
	Residual	150.306	722	.208		
	Total	3042.702	726			
5	Regression	2893.904	5	578.781	2804.496	.000[e]
	Residual	148.797	721	.206		
	Total	3042.702	726			

a. Predictors: (Constant), DB

b. Predictors: (Constant), DB, T_SOIL

c. Predictors: (Constant), DB, T_SOIL, IN_H_G

d. Predictors: (Constant), DB, T_SOIL, IN_H_G, VENT

e. Predictors: (Constant), DB, T_SOIL, IN_H_G, VENT, TIME

f. Dependent Variable: TA_RM21

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.842	.300		59.375	.000
	DB	.427	.009	.861	45.570	.000
2	(Constant)	-1.249	.401		-3.118	.002
	DB	.289	.005	.583	56.120	.000
	T_SOIL	.736	.014	.529	50.885	.000
3	(Constant)	-.536	.388		-1.381	.168
	DB	.267	.005	.538	48.778	.000
	T_SOIL	.734	.014	.527	53.436	.000
	IN_H_G	2.047E-03	.000	.089	9.036	.000
4	(Constant)	-2.217E-02	.399		-.056	.956
	DB	.289	.007	.584	39.490	.000
	T_SOIL	.690	.017	.495	41.530	.000
	IN_H_G	1.974E-03	.000	.085	8.805	.000
	VENT	.238	.052	.054	4.538	.000
5	(Constant)	.246	.410		.600	.549
	DB	.286	.007	.576	38.389	.000
	T_SOIL	.683	.017	.490	40.734	.000
	IN_H_G	2.088E-03	.000	.090	9.192	.000
	VENT	.235	.052	.053	4.493	.000
	TIME	2.043E-06	.000	.024	2.704	.007

Coefficients[a]

Model		95% Confidence Interval for B		Correlations		
		Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	17.252	18.432			
	DB	.409	.445	.861	.861	.861
2	(Constant)	-2.036	-.463			
	DB	.279	.299	.861	.902	.496
	T_SOIL	.708	.765	.835	.884	.450
3	(Constant)	-1.298	.226			
	DB	.256	.278	.861	.876	.409
	T_SOIL	.707	.761	.835	.893	.448
	IN_H_G	.002	.002	.519	.319	.076
4	(Constant)	-.806	.762			
	DB	.275	.304	.861	.827	.327
	T_SOIL	.658	.723	.835	.840	.344
	IN_H_G	.002	.002	.519	.311	.073
	VENT	.135	.341	-.183	.167	.038
5	(Constant)	-.559	1.050			
	DB	.271	.300	.861	.819	.316
	T_SOIL	.650	.716	.835	.835	.335
	IN_H_G	.002	.003	.519	.324	.076
	VENT	.132	.337	-.183	.165	.037
	TIME	.000	.000	.366	.100	.022

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	DB	1.000	1.000
2	(Constant)		
	DB	.724	1.382
	T_SOIL	.724	1.382
3	(Constant)		
	DB	.577	1.732
	T_SOIL	.723	1.383
	IN_H_G	.732	1.367
4	(Constant)		
	DB	.313	3.191
	T_SOIL	.481	2.080
	IN_H_G	.728	1.374
	VENT	.491	2.038
5	(Constant)		
	DB	.302	3.316
	T_SOIL	.468	2.135
	IN_H_G	.703	1.423
	VENT	.490	2.039
	TIME	.834	1.199

a. Dependent Variable: TA_RM21

Excluded Variables[f]

Model		Beta In	t	Sig.	Partial Correlation
1	WB	-.458[a]	-12.029	.000	-.408
	RAD	-.404[a]	-15.437	.000	-.498
	TIME	.106[a]	5.419	.000	.197
	T_SOIL	.529[a]	50.885	.000	.884
	VENT	.343[a]	19.183	.000	.581
	TOP_W	.252[a]	15.001	.000	.487
	IN_H_G	.100[a]	4.587	.000	.168
2	WB	-.012[b]	-.541	.589	-.020
	RAD	.009[b]	.507	.612	.019
	TIME	.009[b]	.989	.323	.037
	VENT	.061[b]	4.934	.000	.180
	TOP_W	-.001[b]	-.101	.919	-.004
	IN_H_G	.089[b]	9.036	.000	.319
3	WB	-.021[c]	-1.006	.315	-.037
	RAD	-.042[c]	-2.468	.014	-.091
	TIME	.025[c]	2.774	.006	.103
	VENT	.054[c]	4.538	.000	.167
	TOP_W	-.006[c]	-.570	.569	-.021
4	WB	-.025[d]	-1.243	.214	-.046
	RAD	-.040[d]	-2.339	.020	-.087
	TIME	.024[d]	2.704	.007	.100
	TOP_W	-.010[d]	-.967	.334	-.036
5	WB	-.028[e]	-1.387	.166	-.052
	RAD	-.030[e]	-1.711	.088	-.064
	TOP_W	-.007[e]	-.733	.464	-.027

Excluded Variables[f]

Model		Collinearity Statistics		
		Tolerance	VIF	Minimum Tolerance
1	WB	.206	4.856	.206
	RAD	.393	2.543	.393
	TIME	.901	1.109	.901
	T_SOIL	.724	1.382	.724
	VENT	.742	1.348	.742
	TOP_W	.968	1.033	.968
	IN_H_G	.732	1.366	.732
2	WB	.164	6.104	.130
	RAD	.265	3.773	.194
	TIME	.864	1.158	.693
	VENT	.493	2.027	.366
	TOP_W	.673	1.487	.503
	IN_H_G	.732	1.367	.577
3	WB	.163	6.119	.126
	RAD	.238	4.196	.194
	TIME	.834	1.199	.544
	VENT	.491	2.038	.313
	TOP_W	.671	1.491	.462
4	WB	.163	6.133	.103
	RAD	.238	4.201	.155
	TIME	.834	1.199	.302
	TOP_W	.666	1.502	.285
5	WB	.163	6.149	.103
	RAD	.222	4.495	.139
	TOP_W	.661	1.514	.278

a. Predictors in the Model: (Constant), DB

b. Predictors in the Model: (Constant), DB, T_SOIL

c. Predictors in the Model: (Constant), DB, T_SOIL, IN_H_G

d. Predictors in the Model: (Constant), DB, T_SOIL, IN_H_G, VENT

e. Predictors in the Model: (Constant), DB, T_SOIL, IN_H_G, VENT, TIME

f. Dependent Variable: TA_RM21

Coefficient Correlations[a]

Model			DB	T_SOIL	IN_H_G
1	Correlations	DB	1.000		
	Covariances	DB	8.782E-05		
2	Correlations	DB	1.000	-.526	
		T_SOIL	-.526	1.000	
	Covariances	DB	2.655E-05	-3.921E-05	
		T_SOIL	-3.921E-05	2.095E-04	
3	Correlations	DB	1.000	-.460	-.450
		T_SOIL	-.460	1.000	-.022
		IN_H_G	-.450	-.022	1.000
	Covariances	DB	2.995E-05	-3.455E-05	-5.577E-07
		T_SOIL	-3.455E-05	1.886E-04	-6.748E-08
		IN_H_G	-5.577E-07	-6.748E-08	5.133E-08
4	Correlations	DB	1.000	-.668	-.379
		T_SOIL	-.668	1.000	.024
		IN_H_G	-.379	.024	1.000
		VENT	.676	-.579	-.072
	Covariances	DB	5.372E-05	-8.131E-05	-6.233E-07
		T_SOIL	-8.131E-05	2.761E-04	9.026E-08
		IN_H_G	-6.233E-07	9.026E-08	5.024E-08
		VENT	2.599E-04	-5.046E-04	-8.503E-07
5	Correlations	DB	1.000	-.615	-.402
		T_SOIL	-.615	1.000	-.006
		IN_H_G	-.402	-.006	1.000
		VENT	.668	-.567	-.075
		TIME	-.194	-.161	.186
	Covariances	DB	5.533E-05	-7.673E-05	-6.787E-07
		T_SOIL	-7.673E-05	2.810E-04	-2.444E-08
		IN_H_G	-6.787E-07	-2.444E-08	5.159E-08
		VENT	2.594E-04	-4.969E-04	-8.948E-07
		TIME	-1.088E-09	-2.036E-09	3.194E-11

Coefficient Correlations[a]

Model			VENT	TIME
1	Correlations	DB		
	Covariances	DB		
2	Correlations	DB		
		T_SOIL		
	Covariances	DB		
		T_SOIL		
3	Correlations	DB		
		T_SOIL		
		IN_H_G		
	Covariances	DB		
		T_SOIL		
		IN_H_G		
4	Correlations	DB	.676	
		T_SOIL	-.579	
		IN_H_G	-.072	
		VENT	1.000	
	Covariances	DB	2.599E-04	
		T_SOIL	-5.046E-04	
		IN_H_G	-8.503E-07	
		VENT	2.751E-03	
5	Correlations	DB	.668	-.194
		T_SOIL	-.567	-.161
		IN_H_G	-.075	.186
		VENT	1.000	-.024
		TIME	-.024	1.000
	Covariances	DB	2.594E-04	-1.088E-09
		T_SOIL	-4.969E-04	-2.036E-09
		IN_H_G	-8.948E-07	3.194E-11
		VENT	2.729E-03	-9.279E-10
		TIME	-9.279E-10	5.710E-13

[a]. Dependent Variable: TA_RM21

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index
1	1	1.992	1.000
	2	8.307E-03	15.485
2	1	2.990	1.000
	2	9.513E-03	17.728
	3	8.916E-04	57.906
3	1	3.233	1.000
	2	.759	2.065
	3	7.159E-03	21.252
	4	8.849E-04	60.447
4	1	3.927	1.000
	2	.836	2.167
	3	.231	4.121
	4	4.658E-03	29.035
	5	6.581E-04	77.249
5	1	4.708	1.000
	2	.841	2.366
	3	.289	4.039
	4	.158	5.460
	5	4.255E-03	33.262
	6	6.382E-04	85.885

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions		
		(Constant)	DB	T_SOIL
1	1	.00	.00	
	2	1.00	1.00	
2	1	.00	.00	.00
	2	.05	.82	.01
	3	.95	.17	.98
3	1	.00	.00	.00
	2	.00	.00	.00
	3	.06	.89	.02
	4	.94	.11	.98
4	1	.00	.00	.00
	2	.00	.00	.00
	3	.00	.00	.00
	4	.14	.65	.01
	5	.86	.35	.99
5	1	.00	.00	.00
	2	.00	.00	.00
	3	.00	.00	.00
	4	.00	.00	.00
	5	.13	.72	.01
	6	.87	.28	.99

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions		
		IN_H_G	VENT	TIME
1	1			
	2			
2	1			
	2			
	3			
3	1	.02		
	2	.73		
	3	.25		
	4	.01		
4	1	.01	.01	
	2	.64	.02	
	3	.14	.45	
	4	.21	.25	
	5	.00	.27	
5	1	.01	.00	.01
	2	.63	.01	.00
	3	.07	.30	.26
	4	.06	.16	.61
	5	.23	.26	.09
	6	.00	.25	.03

a. Dependent Variable: TA_RM21

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
TA_RM22	31.4832	2.1529	727
DB	31.8000	4.1273	727
WB	27.7791	1.3875	727
RAD	89.8649	113.2940	727
TIME	11:40	6:47	727
VENT	.69	.46	727
TOP_W	.58	.49	727
IN_H_G	38.9546	88.5575	727

Correlations

		TA_RM22	DB	WB	RAD
Pearson Correlation	TA_RM22	1.000	.861	.669	.539
	DB	.861	1.000	.891	.779
	WB	.669	.891	1.000	.769
	RAD	.539	.779	.769	1.000
	TIME	.371	.314	.256	.033
	VENT	-.205	-.508	-.540	-.578
	TOP_W	.076	-.179	-.286	-.238
	IN_H_G	.545	.518	.474	.536
Sig. (1-tailed)	TA_RM22	.	.000	.000	.000
	DB	.000	.	.000	.000
	WB	.000	.000	.	.000
	RAD	.000	.000	.000	.
	TIME	.000	.000	.000	.188
	VENT	.000	.000	.000	.000
	TOP_W	.020	.000	.000	.000
	IN_H_G	.000	.000	.000	.000
N	TA_RM22	727	727	727	727
	DB	727	727	727	727
	WB	727	727	727	727
	RAD	727	727	727	727
	TIME	727	727	727	727
	VENT	727	727	727	727
	TOP_W	727	727	727	727
	IN_H_G	727	727	727	727

Correlations

		TIME	VENT	TOP_W	IN_H_G
Pearson Correlation	TA_RM22	.371	-.205	.076	.545
	DB	.314	-.508	-.179	.518
	WB	.256	-.540	-.286	.474
	RAD	.033	-.578	-.238	.536
	TIME	1.000	-.057	-.023	.019
	VENT	-.057	1.000	.413	-.210
	TOP_W	-.023	.413	1.000	-.047
	IN_H_G	.019	-.210	-.047	1.000
Sig. (1-tailed)	TA_RM22	.000	.000	.020	.000
	DB	.000	.000	.000	.000
	WB	.000	.000	.000	.000
	RAD	.188	.000	.000	.000
	TIME	.	.064	.270	.303
	VENT	.064	.	.000	.000
	TOP_W	.270	.000	.	.105
	IN_H_G	.303	.000	.105	.
N	TA_RM22	727	727	727	727
	DB	727	727	727	727
	WB	727	727	727	727
	RAD	727	727	727	727
	TIME	727	727	727	727
	VENT	727	727	727	727
	TOP_W	727	727	727	727
	IN_H_G	727	727	727	727

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	DB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	VENT	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
3	WB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	TOP_W	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
5	IN_H_G	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
6	RAD	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
7	TIME	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: TA_RM22

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.861[a]	.742	.742	1.0943
2	.903[b]	.815	.814	.9278
3	.917[c]	.841	.840	.8603
4	.924[d]	.853	.852	.8281
5	.929[e]	.863	.862	.7999
6	.938[f]	.880	.879	.7483
7	.940[g]	.883	.882	.7400

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	.742	2085.243	1	725	.000
2	.073	284.472	1	724	.000
3	.026	119.032	1	723	.000
4	.012	58.341	1	722	.000
5	.010	52.808	1	721	.000
6	.017	103.828	1	720	.000
7	.003	17.406	1	719	.000

a. Predictors: (Constant), DB

b. Predictors: (Constant), DB, VENT

c. Predictors: (Constant), DB, VENT, WB

d. Predictors: (Constant), DB, VENT, WB, TOP_W

e. Predictors: (Constant), DB, VENT, WB, TOP_W, IN_H_G

f. Predictors: (Constant), DB, VENT, WB, TOP_W, IN_H_G, RAD

g. Predictors: (Constant), DB, VENT, WB, TOP_W, IN_H_G, RAD, TIME

ANOVA[h]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2496.971	1	2496.971	2085.243	.000[a]
	Residual	868.150	725	1.197		
	Total	3365.121	726			
2	Regression	2741.860	2	1370.930	1592.518	.000[b]
	Residual	623.260	724	.861		
	Total	3365.121	726			
3	Regression	2829.966	3	943.322	1274.438	.000[c]
	Residual	535.155	723	.740		
	Total	3365.121	726			
4	Regression	2869.976	4	717.494	1046.221	.000[d]
	Residual	495.145	722	.686		
	Total	3365.121	726			
5	Regression	2903.767	5	580.753	907.597	.000[e]
	Residual	461.354	721	.640		
	Total	3365.121	726			
6	Regression	2961.912	6	493.652	881.502	.000[f]
	Residual	403.209	720	.560		
	Total	3365.121	726			
7	Regression	2971.442	7	424.492	775.276	.000[g]
	Residual	393.678	719	.548		
	Total	3365.121	726			

a. Predictors: (Constant), DB

b. Predictors: (Constant), DB, VENT

c. Predictors: (Constant), DB, VENT, WB

d. Predictors: (Constant), DB, VENT, WB, TOP_W

e. Predictors: (Constant), DB, VENT, WB, TOP_W, IN_H_G

f. Predictors: (Constant), DB, VENT, WB, TOP_W, IN_H_G, RAD

g. Predictors: (Constant), DB, VENT, WB, TOP_W, IN_H_G, RAD, TIME

h. Dependent Variable: TA_RM22

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.194	.316		54.494	.000
	DB	.449	.010	.861	45.664	.000
2	(Constant)	13.539	.344		39.323	.000
	DB	.532	.010	1.021	54.958	.000
	VENT	1.463	.087	.313	16.866	.000
3	(Constant)	24.404	1.046		23.335	.000
	DB	.691	.017	1.325	40.430	.000
	VENT	1.261	.083	.270	15.285	.000
	WB	-.568	.052	-.366	-10.910	.000
4	(Constant)	22.694	1.031		22.006	.000
	DB	.664	.017	1.273	39.476	.000
	VENT	1.043	.084	.223	12.359	.000
	WB	-.481	.051	-.310	-9.367	.000
	TOP_W	.535	.070	.123	7.638	.000
5	(Constant)	24.097	1.015		23.749	.000
	DB	.636	.017	1.219	38.090	.000
	VENT	1.006	.082	.215	12.318	.000
	WB	-.502	.050	-.324	-10.106	.000
	TOP_W	.514	.068	.118	7.595	.000
	IN_H_G	2.861E-03	.000	.118	7.267	.000
6	(Constant)	20.737	1.005		20.636	.000
	DB	.678	.016	1.300	41.969	.000
	VENT	.752	.080	.161	9.359	.000
	WB	-.410	.047	-.264	-8.649	.000
	TOP_W	.512	.063	.117	8.077	.000
	IN_H_G	3.981E-03	.000	.164	10.357	.000
	RAD	-4.511E-03	.000	-.237	-10.190	.000
7	(Constant)	21.376	1.005		21.262	.000
	DB	.656	.017	1.257	38.932	.000
	VENT	.742	.080	.159	9.324	.000
	WB	-.417	.047	-.269	-8.899	.000
	TOP_W	.515	.063	.118	8.227	.000
	IN_H_G	4.139E-03	.000	.170	10.837	.000
	RAD	-3.934E-03	.000	-.207	-8.572	.000
	TIME	5.316E-06	.000	.060	4.172	.000

Coefficients[a]

Model		95% Confidence Interval for B		Correlations		
		Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	16.575	17.814			
	DB	.430	.469	.861	.861	.861
2	(Constant)	12.863	14.215			
	DB	.513	.551	.861	.898	.879
	VENT	1.293	1.633	-.205	.531	.270
3	(Constant)	22.351	26.458			
	DB	.657	.725	.861	.833	.600
	VENT	1.099	1.423	-.205	.494	.227
	WB	-.670	-.466	.669	-.376	-.162
4	(Constant)	20.669	24.719			
	DB	.631	.697	.861	.827	.564
	VENT	.878	1.209	-.205	.418	.176
	WB	-.582	-.380	.669	-.329	-.134
	TOP_W	.398	.673	.076	.273	.109
5	(Constant)	22.105	26.090			
	DB	.603	.669	.861	.817	.525
	VENT	.846	1.167	-.205	.417	.170
	WB	-.600	-.405	.669	-.352	-.139
	TOP_W	.381	.647	.076	.272	.105
	IN_H_G	.002	.004	.545	.261	.100
6	(Constant)	18.765	22.710			
	DB	.646	.710	.861	.843	.541
	VENT	.595	.910	-.205	.329	.121
	WB	-.503	-.317	.669	-.307	-.112
	TOP_W	.387	.636	.076	.288	.104
	IN_H_G	.003	.005	.545	.360	.134
	RAD	-.005	-.004	.539	-.355	-.131
7	(Constant)	19.402	23.349			
	DB	.623	.689	.861	.824	.497
	VENT	.585	.898	-.205	.328	.119
	WB	-.509	-.325	.669	-.315	-.114
	TOP_W	.392	.638	.076	.293	.105
	IN_H_G	.003	.005	.545	.375	.138
	RAD	-.005	-.003	.539	-.304	-.109
	TIME	.000	.000	.371	.154	.053

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	DB	1.000	1.000
2	(Constant)		
	DB	.742	1.348
	VENT	.742	1.348
3	(Constant)		
	DB	.205	4.880
	VENT	.705	1.419
	WB	.196	5.113
4	(Constant)		
	DB	.196	5.103
	VENT	.624	1.602
	WB	.186	5.375
	TOP_W	.788	1.269
5	(Constant)		
	DB	.186	5.390
	VENT	.622	1.609
	WB	.185	5.393
	TOP_W	.787	1.271
	IN_H_G	.725	1.379
6	(Constant)		
	DB	.174	5.762
	VENT	.562	1.780
	WB	.179	5.599
	TOP_W	.787	1.271
	IN_H_G	.666	1.502
	RAD	.307	3.261
7	(Constant)		
	DB	.156	6.406
	VENT	.561	1.782
	WB	.178	5.607
	TOP_W	.786	1.272
	IN_H_G	.659	1.517
	RAD	.279	3.585
	TIME	.778	1.285

[a]. Dependent Variable: TA_RM22

Excluded Variables[g]

Model		Beta In	t	Sig.	Partial Correlation
1	WB	-.481[a]	-12.793	.000	-.429
	RAD	-.336[a]	-12.284	.000	-.415
	TIME	.112[a]	5.740	.000	.209
	VENT	.313[a]	16.866	.000	.531
	TOP_W	.238[a]	13.959	.000	.460
	IN_H_G	.135[a]	6.280	.000	.227
2	WB	-.366[b]	-10.910	.000	-.376
	RAD	-.216[b]	-8.325	.000	-.296
	TIME	.077[b]	4.599	.000	.169
	TOP_W	.156[b]	9.405	.000	.330
	IN_H_G	.113[b]	6.180	.000	.224
3	RAD	-.167[c]	-6.695	.000	-.242
	TIME	.072[c]	4.645	.000	.170
	TOP_W	.123[c]	7.638	.000	.273
	IN_H_G	.123[c]	7.311	.000	.263
4	RAD	-.168[d]	-7.041	.000	-.254
	TIME	.074[d]	4.993	.000	.183
	IN_H_G	.118[d]	7.267	.000	.261
5	RAD	-.237[e]	-10.190	.000	-.355
	TIME	.098[e]	6.748	.000	.244
6	TIME	.060[f]	4.172	.000	.154

Excluded Variables[g]

Model		Collinearity Statistics		
		Tolerance	VIF	Minimum Tolerance
1	WB	.206	4.856	.206
	RAD	.393	2.543	.393
	TIME	.901	1.109	.901
	VENT	.742	1.348	.742
	TOP_W	.968	1.033	.968
	IN_H_G	.732	1.366	.732
2	WB	.196	5.113	.196
	RAD	.348	2.870	.348
	TIME	.887	1.127	.660
	TOP_W	.828	1.207	.635
	IN_H_G	.728	1.373	.565
3	RAD	.334	2.994	.184
	TIME	.886	1.128	.195
	TOP_W	.788	1.269	.186
	IN_H_G	.726	1.377	.193
4	RAD	.334	2.994	.177
	TIME	.886	1.129	.186
	IN_H_G	.725	1.379	.185
5	RAD	.307	3.261	.174
	TIME	.855	1.169	.175
6	TIME	.778	1.285	.156

a. Predictors in the Model: (Constant), DB

b. Predictors in the Model: (Constant), DB, VENT

c. Predictors in the Model: (Constant), DB, VENT, WB

d. Predictors in the Model: (Constant), DB, VENT, WB, TOP_W

e. Predictors in the Model: (Constant), DB, VENT, WB, TOP_W, IN_H_G

f. Predictors in the Model: (Constant), DB, VENT, WB, TOP_W, IN_H_G, RAD

g. Dependent Variable: TA_RM22

Coefficient Correlations[a]

Model			DB	VENT	WB	TOP_W
1	Correlations	DB	1.000			
	Covariances	DB	9.682E-05			
2	Correlations	DB	1.000	.508		
		VENT	.508	1.000		
	Covariances	DB	9.382E-05	4.268E-04		
		VENT	4.268E-04	7.524E-03		
3	Correlations	DB	1.000	.070	-.851	
		VENT	.070	1.000	.224	
		WB	-.851	.224	1.000	
	Covariances	DB	2.921E-04	9.834E-05	-7.565E-04	
		VENT	9.834E-05	6.811E-03	9.614E-04	
		WB	-7.565E-04	9.614E-04	2.707E-03	
4	Correlations	DB	1.000	.135	-.858	-.209
		VENT	.135	1.000	.131	-.338
		WB	-.858	.131	1.000	.221
		TOP_W	-.209	-.338	.221	1.000
	Covariances	DB	2.830E-04	1.916E-04	-7.409E-04	-2.465E-04
		VENT	1.916E-04	7.126E-03	5.667E-04	-2.001E-03
		WB	-7.409E-04	5.667E-04	2.637E-03	7.948E-04
		TOP_W	-2.465E-04	-2.001E-03	7.948E-04	4.907E-03
5	Correlations	DB	1.000	.145	-.820	-.194
		VENT	.145	1.000	.134	-.335
		WB	-.820	.134	1.000	.223
		TOP_W	-.194	-.335	.223	1.000
		IN_H_G	-.231	-.062	-.059	-.042
	Covariances	DB	2.789E-04	1.983E-04	-6.801E-04	-2.190E-04
		VENT	1.983E-04	6.675E-03	5.436E-04	-1.852E-03
		WB	-6.801E-04	5.436E-04	2.469E-03	7.498E-04
		TOP_W	-2.190E-04	-1.852E-03	7.498E-04	4.587E-03
		IN_H_G	-1.516E-06	-2.001E-06	-1.145E-06	-1.121E-06
6	Correlations	DB	1.000	.055	-.729	-.188
		VENT	.055	1.000	.066	-.317
		WB	-.729	.066	1.000	.218
		TOP_W	-.188	-.317	.218	1.000
		IN_H_G	-.141	-.145	.000	-.041
		RAD	-.254	.310	-.192	.004

Coefficient Correlations[a]

Model			DB	VENT	WB	TOP_W
6	Covariances	DB	2.609E-04	7.128E-05	-5.579E-04	-1.927E-04
		VENT	7.128E-05	6.463E-03	2.495E-04	-1.615E-03
		WB	-5.579E-04	2.495E-04	2.243E-03	6.539E-04
		TOP_W	-1.927E-04	-1.615E-03	6.539E-04	4.014E-03
		IN_H_G	-8.760E-07	-4.491E-06	-4.256E-09	-1.010E-06
		RAD	-1.817E-06	1.103E-05	-4.019E-06	1.138E-07
7	Correlations	DB	1.000	.062	-.679	-.183
		VENT	.062	1.000	.067	-.317
		WB	-.679	.067	1.000	.217
		TOP_W	-.183	-.317	.217	1.000
		IN_H_G	-.165	-.148	-.004	-.040
		RAD	-.325	.286	-.194	.008
		TIME	-.317	-.033	-.038	.014
	Covariances	DB	2.836E-04	8.353E-05	-5.360E-04	-1.932E-04
		VENT	8.353E-05	6.325E-03	2.485E-04	-1.581E-03
		WB	-5.360E-04	2.485E-04	2.197E-03	6.378E-04
		TOP_W	-1.932E-04	-1.581E-03	6.378E-04	3.926E-03
		IN_H_G	-1.059E-06	-4.489E-06	-7.145E-08	-9.535E-07
		RAD	-2.514E-06	1.043E-05	-4.174E-06	2.344E-07
		TIME	-6.803E-09	-3.302E-09	-2.263E-09	1.136E-09

Coefficient Correlations[a]

Model			IN_H_G	RAD	TIME
1	Correlations	DB			
	Covariances	DB			
2	Correlations	DB			
		VENT			
	Covariances	DB			
		VENT			
3	Correlations	DB			
		VENT			
		WB			
	Covariances	DB			
		VENT			
		WB			
4	Correlations	DB			
		VENT			
		WB			
		TOP_W			
	Covariances	DB			
		VENT			
		WB			
		TOP_W			
5	Correlations	DB	-.231		
		VENT	-.062		
		WB	-.059		
		TOP_W	-.042		
		IN_H_G	1.000		
	Covariances	DB	-1.516E-06		
		VENT	-2.001E-06		
		WB	-1.145E-06		
		TOP_W	-1.121E-06		
		IN_H_G	1.550E-07		
6	Correlations	DB	-.141	-.254	
		VENT	-.145	.310	
		WB	.000	-.192	
		TOP_W	-.041	.004	
		IN_H_G	1.000	-.286	
		RAD	-.286	1.000	

Coefficient Correlations[a]

Model			IN_H_G	RAD	TIME
6	Covariances	DB	-8.760E-07	-1.817E-06	
		VENT	-4.491E-06	1.103E-05	
		WB	-4.256E-09	-4.019E-06	
		TOP_W	-1.010E-06	1.138E-07	
		IN_H_G	1.477E-07	-4.866E-08	
		RAD	-4.866E-08	1.960E-07	
7	Correlations	DB	-.165	-.325	-.317
		VENT	-.148	.286	-.033
		WB	-.004	-.194	-.038
		TOP_W	-.040	.008	.014
		IN_H_G	1.000	-.242	.099
		RAD	-.242	1.000	.301
		TIME	.099	.301	1.000
	Covariances	DB	-1.059E-06	-2.514E-06	-6.803E-09
		VENT	-4.489E-06	1.043E-05	-3.302E-09
		WB	-7.145E-08	-4.174E-06	-2.263E-09
		TOP_W	-9.535E-07	2.344E-07	1.136E-09
		IN_H_G	1.459E-07	-4.234E-08	4.828E-11
		RAD	-4.234E-08	2.107E-07	1.760E-10
		TIME	4.828E-11	1.760E-10	1.624E-12

a. Dependent Variable: TA_RM22

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index
1	1	1.992	1.000
	2	8.307E-03	15.485
2	1	2.747	1.000
	2	.248	3.329
	3	5.507E-03	22.333
3	1	3.721	1.000
	2	.273	3.695
	3	5.849E-03	25.223
	4	3.071E-04	110.077
4	1	4.395	1.000
	2	.392	3.348
	3	.206	4.615
	4	5.844E-03	27.425
	5	2.917E-04	122.751
5	1	4.579	1.000
	2	.865	2.301
	3	.358	3.578
	4	.193	4.870
	5	4.644E-03	31.401
	6	2.898E-04	125.713
6	1	5.000	1.000
	2	1.176	2.062
	3	.454	3.319
	4	.261	4.379
	5	.106	6.870
	6	3.400E-03	38.347
	7	2.764E-04	134.489
7	1	5.759	1.000
	2	1.181	2.208
	3	.481	3.462
	4	.280	4.537
	5	.202	5.345
	6	9.534E-02	7.772
	7	2.809E-03	45.277
	8	2.756E-04	144.562

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions				
		(Constant)	DB	VENT	WB	TOP_W
1	1	.00	.00			
	2	1.00	1.00			
2	1	.00	.00	.02		
	2	.00	.01	.63		
	3	.99	.99	.34		
3	1	.00	.00	.01	.00	
	2	.00	.00	.62	.00	
	3	.06	.33	.30	.00	
	4	.94	.67	.07	1.00	
4	1	.00	.00	.01	.00	.01
	2	.00	.00	.07	.00	.45
	3	.00	.00	.62	.00	.48
	4	.06	.31	.28	.00	.00
	5	.94	.69	.03	1.00	.05
5	1	.00	.00	.01	.00	.01
	2	.00	.00	.02	.00	.02
	3	.00	.00	.03	.00	.53
	4	.00	.00	.68	.00	.39
	5	.07	.39	.24	.00	.00
	6	.93	.61	.03	1.00	.05
6	1	.00	.00	.00	.00	.01
	2	.00	.00	.02	.00	.03
	3	.00	.00	.02	.00	.12
	4	.00	.00	.09	.00	.77
	5	.00	.00	.80	.00	.03
	6	.07	.54	.05	.01	.00
	7	.93	.46	.01	.99	.05
7	1	.00	.00	.00	.00	.01
	2	.00	.00	.02	.00	.02
	3	.00	.00	.03	.00	.16
	4	.00	.00	.04	.00	.51
	5	.00	.00	.17	.00	.25
	6	.00	.00	.68	.00	.01
	7	.08	.61	.04	.01	.00
	8	.92	.39	.01	.99	.05

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions		
		IN_H_G	RAD	TIME
1	1			
	2			
2	1			
	2			
	3			
3	1			
	2			
	3			
	4			
4	1			
	2			
	3			
	4			
	5			
5	1	.01		
	2	.61		
	3	.10		
	4	.07		
	5	.21		
	6	.01		
6	1	.01	.00	
	2	.20	.05	
	3	.56	.08	
	4	.11	.09	
	5	.08	.46	
	6	.05	.26	
	7	.00	.05	
7	1	.00	.00	.00
	2	.20	.05	.00
	3	.46	.05	.04
	4	.21	.14	.12
	5	.01	.02	.51
	6	.06	.38	.15
	7	.06	.32	.18
	8	.00	.05	.00

a. Dependent Variable: TA_RM22

ค่าอุณหภูมิผิวเฉลี่ยโดยรอบอาคารทดสอบ

การคิดค่า อุณหภูมิเฉลี่ยพื้นผิวโดยรอบอาคารชั้นล่าง

กรณีพิจารณาจากหุ่นจำลองที่มีการใช้ความเย็นจากดินทิศเหนือ ตะวันออกและตะวันตก

กลางวัน ระบบเปิด (t +273)^4

ตำแหน่งผนัง	Angle facter	อุณหภูมิผิว	องศาเซลเซียส	องศาเคลวิน^ 4	Angle facter*อุณหภูมิผิว
north wall	0.0220	ผิวกรอบอาคาร	33.02	8787200517	193318411.4
	0.0220	ผิวกรอบอาคาร	33.02	8787200517	193318411.4
	0.0065	ผิวผนังสัมผัสดิน	33.15	8802134232	57213872.51
	0.0065	ผิวผนังสัมผัสดิน	33.15	8802134232	57213872.51
	0.0080	ผิวกระจก	33.28	8817086973	70536695.78
	0.0080	ผิวกระจก	33.28	8817086973	70536695.78
South wall	0.0300	ผิวกรอบอาคาร	32.9	8773432424	263202972.7
	0.0300	ผิวกรอบอาคาร	32.9	8773432424	263202972.7
	0.0065	ผิวกรอบอาคาร	32	8670686762	56359463.96
	0.0065	ผิวกรอบอาคาร	32	8670686762	56359463.96
east wall	0.0522	ผิวกรอบอาคาร	32.87	8769992930	457793630.9
	0.0522	ผิวกรอบอาคาร	32.87	8769992930	457793630.9
	0.0100	ผิวผนังสัมผัสดิน	32.87	8769992930	87699929.3
	0.0100	ผิวผนังสัมผัสดิน	32.87	8769992930	87699929.3
west wall	0.0522	ผิวกรอบอาคาร	33	8784904711	458572025.9
	0.0522	ผิวกรอบอาคาร	33	8784904711	458572025.9
	0.0100	ผิวผนังสัมผัสดิน	32.77	8758535254	87585352.54
	0.0100	ผิวผนังสัมผัสดิน	32.77	8758535254	87585352.54
floor	0.1500	ผิวพื้นสัมผัสดิน	32.5	8727655604	1309148341
	0.1500	ผิวพื้นสัมผัสดิน	32.5	8727655604	1309148341
	0.1500	ผิวพื้นสัมผัสดิน	32.5	8727655604	1309148341
	0.1500	ผิวพื้นสัมผัสดิน	32.5	8727655604	1309148341
ceiling	0.0013	ผิวฝ้าหลังคาทิศเหนือ	33.42	8833211221	11483174.59
	0.0013	ผิวฝ้าหลังคาทิศเหนือ	33.42	8833211221	11483174.59
	0.0013	ผิวฝ้าหลังคาทิศใต้	32.91	8774579147	11406952.89
	0.0013	ผิวฝ้าหลังคาทิศใต้	32.91	8774579147	11406952.89
อุณหภูมิเฉลี่ยพื้นผิวโดยรอบ	1.0000				**32.66868469**

หมายเหตุ อุณหภูมิกรอบอาคารต่างๆ เก็บข้อมูลวันที่ 18 เมษายน 2545

อุณหภูมิห้องล่าง	33.11
ผลต่าง	-0.44

การคิดค่า อุณหภูมิเฉลี่ยพื้นผิวโดยรอบอาคารชั้นบน

กลางวัน ระบบเปิด

(t +273)^4

ตำแหน่งผนัง	Angle facter	อุณหภูมิผิว	องศาเซลเซียส	องศาเคลวิน^ 4	Angle facter*อุณหภูมิผิว
north wall	0.0170	ผิวกรอบอาคาร	33.04	8789496774	149421445.2
	0.0170	ผิวกรอบอาคาร	33.04	8789496774	149421445.2
	0.0065	ผิวกรอบอาคาร	32.9	8773432424	57027310.76
	0.0065	ผิวกรอบอาคาร	32.9	8773432424	57027310.76
	0.0080	ผิวกระจก	33.76	8872462181	70979697.45
	0.0080	ผิวกระจก	33.76	8872462181	70979697.45
South wall	0.0250	ผิวกรอบอาคาร	33.01	8786052558	219651313.9
	0.0250	ผิวกรอบอาคาร	33.01	8786052558	219651313.9
	0.0065	ผิวกรอบอาคาร	32.89	8772285814	57019857.79
	0.0065	ผิวกรอบอาคาร	32.89	8772285814	57019857.79
east wall	0.0572	ผิวกรอบอาคาร	33.14	8800984809	503416331.1
	0.0572	ผิวกรอบอาคาร	33.14	8800984809	503416331.1
	0.0100	ผิวกรอบอาคาร	33.16	8803283767	88032837.67
	0.0100	ผิวกรอบอาคาร	33.16	8803283767	88032837.67
west wall	0.0572	ผิวกรอบอาคาร	32.9	8773432424	501840334.6
	0.0572	ผิวกรอบอาคาร	32.9	8773432424	501840334.6
	0.0100	ผิวกรอบอาคาร	33	8784904711	87849047.11
	0.0100	ผิวกรอบอาคาร	33	8784904711	87849047.11
floor	0.1500	ผิวพื้น	32.78	8759680516	1313952077
	0.1500	ผิวพื้น	32.78	8759680516	1313952077
	0.1500	ผิวพื้น	32.78	8759680516	1313952077
	0.1500	ผิวพื้น	32.78	8759680516	1313952077
ceiling	0.0013	ผิวฝ้าหลังคาทิศเหนือ	33.12	8798686302	11438292.19
	0.0013	ผิวฝ้าหลังคาทิศเหนือ	33.12	8798686302	11438292.19
	0.0013	ผิวฝ้าหลังคาทิศใต้	33.14	8800984809	11441280.25
	0.0013	ผิวฝ้าหลังคาทิศใต้	33.14	8800984809	11441280.25
อุณหภูมิเฉลี่ยพื้นผิวโดยรอบ	1.0000				**32.88788924**

หมายเหตุ อุณหภูมิกรอบอาคารต่างๆ เก็บข้อมูลวันที่ 18 เมษายน 2545

อุณหภูมิห้องล่าง	33.17
ผลต่าง	-0.28

ค่าคุณสมบัติของกรอบอาคาร

อาคารกรณีที่ 1 อาคารทั่วไป

หลังคา construction	หนา m	density kg/m3	R-value K sq.m/W	R-value sq.ft *F h/Btu	U-value Btu/sq.ft *F h	U-value W/K sq.m
1 ฟิลม์อากาศด้านนอก	0	0	0.044	0.25		
2 กระเบื้องหลังคา	0.0064	1900	0.011	0.06		
3 ช่องว่างอากาศในหลังคา	มากกว่า 0.009	0	0.176	1		
4 แผ่นยิปซัมบอรด์	0.012	800	0.079	0.45		
5 ฟิลม์อากาศด้านใน	0	0	0.16192	0.92		
รวม			0.47192	2.68	0.373134	2.119003

ผนังทึบ construction	หนา m	density kg/m3	R-value K sq.m/W	R-value sq.ft *F h/Btu	U-value W/K sq.m	U-value Btu/sq.ft *F h
1 ฟิลม์อากาศด้านนอก	0	0	0.044	0.25		
2 ปูนผสมทรายฉาบ	0.012		0.023	0.128		
3 อิฐ	0.076		0.094	0.535		
4 ปูนผสมทรายฉาบ	0.012		0.023	0.128		
5 ฟิลม์อากาศด้านใน	0	0	0.120032	0.682		
รวม	0.1		0.304032	1.723	3.289127	0.580383

พื้นระหว่างชั้น construction	หนา m	R-value K sq.m/W	R-value sq.ft *F h/Btu	U-value W/K sq.m	U-value Btu/sq.ft *F h
1 ฟิลม์อากาศด้านใน	0	0.120032	0.682		
2 ปูนผสมทรายฉาบ	0.012	0.023	0.128		
3 พื้น ค.ส.ล.	0.1	0.192	1.089216		
4 ปูนผสมทรายฉาบ	0.012	0.023	0.128		
5 ฟิลม์อากาศด้านใน	0	0.120032	0.682		
รวม	0.124	0.478064	2.709216	2.09177	0.36911

กระจก / หน้าต่าง construction	หนา m	R-value K sq.m/W	R-value sq.ft *F h/Btu	U-value W/K sq.m	U-value Btu/sq.ft *F h
1 ฟิลม์อากาศด้านนอก	0	0.044	0.25		
2 กระจกใส	0.006	0.006	0.682		
3 ฟิลม์อากาศด้านใน	0	0.120032	0.682		
รวม	0.006	0.170032	1.614	5.881246	0.619579

ประตู construction	หนา m	R-value K sq.m/W	R-value sq.ft *F h/Btu	U-value W/K sq.m	U-value Btu/sq.ft *F h
1 ฟิลม์อากาศด้านนอก	0	0.044	0.25		
2 ไม้อัด	0.006	0.05456	0.31		
3 ช่องอากาศ	0.025	0.14784	0.84		
4 ไม้อัด	0.006	0.05456	0.31		
5 ฟิลม์อากาศด้านใน	0	0.120032	0.682		
รวม	0.037	0.420992	2.392	2.375342	0.41806

อาคารกรณีที่ 2 อาคารทดสอบ

หลังคา	หนา	R-value	R-value	U-value	U-value
construction	m	K sq.m/W	sq.ft *F h/Btu	W/K sq.m	Btu/sq.ft *F h
1 ฟิลม์อากาศด้านนอก	0	0.044	0.25		
2 หลังคาสังกะสี	0.002	0.000018	0.0001		
3 ช่องว่างอากาศ	มากกว่า 0.09	0.176	1		
4 ฉนวน fiber glass	0.2	5.34	30		
4 แผ่นยิปซัมบอรด์	0.012	0.079	0.45		
6 ฟิลม์อากาศด้านใน	0	0.16192	0.92		
รวม		5.800938	32.6201	0.1723859	0.03065594

ผนังทึบ	หนา	R-value	R-value	U-value	U-value
construction	m	K sq.m/W	sq.ft *F h/Btu	W/K sq.m	Btu/sq.ft *F h
1 ฟิลม์อากาศด้านนอก	0	0.044	0.25		
2 vegetable fiberboard	0.0127	0.23232	1.32		
3 ฉนวน Cellulosic	0.1	2.6048	14.8		
4 vegetable fiberboard	0.0127	0.23232	1.32		
5 ช่องว่างอากาศ	0.05	0.15312	0.87		
6 อิฐดินซีเมนต์	0.25	0.792	4.5		
7 ปูนผสมทรายฉาบ	0.012	0.023	0.128		
8 ฟิลม์อากาศด้านใน	0	0.120032	0.682		
รวม	0.4374	4.201592	23.87	0.238005	0.04189359

พื้นระหว่างชั้น	หนา	R-value	R-value	U-value	U-value
construction	m	K sq.m/W	sq.ft *F h/Btu	W/K sq.m	Btu/sq.ft *F h
1 ฟิลม์อากาศด้านใน	0	0.120032	0.682		
2 ปูนผสมทรายฉาบ	0.012	0.023	0.128		
3 พื้น ค.ส.ล.	0.1	0.192	1.089216		
4 ปูนผสมทรายฉาบ	0.012	0.023	0.128		
5 ฟิลม์อากาศด้านใน	0	0.120032	0.682		
รวม	0.124	0.478064	2.709216	2.0917701	0.36911047

กระจก / หน้าต่าง	หนา	R-value	R-value	U-value	U-value
construction	m	K sq.m/W	sq.ft *F h/Btu	W/K sq.m	Btu/sq.ft *F h
1 ฟิลม์อากาศด้านนอก	0	0.044	0.25		
2 กระจกใส	0.006	0.006	0.682		
3 ฟิลม์อากาศด้านใน	0	0.120032	0.682		
รวม	0.006	0.170032	1.614	5.8812459	0.61957868

ประตู	หนา	R-value	R-value	U-value	U-value
construction	m	K sq.m/W	sq.ft *F h/Btu	W/K sq.m	Btu/sq.ft *F h
1 ฟิลม์อากาศด้านนอก	0	0.044	0.25		
2 ไม้อัด	0.006	0.05456	0.31		
3 ฉนวน Cellulosic	0.025	0.6512	3.7		
4 ไม้อัด	0.006	0.05456	0.31		
5 ฟิลม์อากาศด้านใน	0	0.120032	0.682		
รวม	0.037	0.924352	5.252	1.081839	0.19040365

ภาระการทำความเย็น

อาคารกรณีที่ 1 อาคารเรียนทั่วไป

rm_11

ceiling

q=U*A*TD

q/A=U*TD

TD	1.66 F
U	0.369 Btu/sq.ft F h
A	48 sq.m
	516.48 sq.ft
q/A	0.61254 Btu/sq.ft
q_ceiling	316.3646592 Btu/h

rm_11

wall
N-wall
ผนังทึบ

q=U*A*CLTD

U	0.58 Btu/sq.ft F h
A	16 sq.m
	172.16 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	10 เวลา 1500 type C
LM	6 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	16
q_N-wall_op	1597.6448 Btu/h

rm_11

N-wall

หน้าต่าง	conduction	
q=U*A*CLTD		
U	0.619	
A	8	sq.m
	86.08	sq.ft
CLTD	14	
q	745.96928	Btu/h

หน้าต่าง	solar	
q=A*SC*SHGF*CLF		
A	8	sq.m
	86.08	sq.ft
SC	0.96	
SHGF	45	
CLF	0.82	
q	3049.29792	Btu/h

q_กระจก รวม	3795.2672	Btu/h

rm_11

wall
S-wall
ผนังทึบ

q=U*A*CLTD		
U	0.58	Btu/sq.ft F h
A	20	sq.m
	215.2	sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)		
CLTD	17	เวลา 1500 type C
LM	-7	Jun
K	0.65	light color-rural area
(78-Tr)+(To-85)	5.6	F

CLTDcorr	12.1
q_S-wall_op	1510.2736 Btu/h

rm_11

S-wall
ประตู

q=U*A*CLTD	
U	0.418 Btu/sq.ft F h
A	4 sq.m
	43.04 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	17 เวลา 1500 type C
LM	-7 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	12.1
q_ประตู	217.687712 Btu/h

rm_11

wall
E-wall
ผนังทึบ

q=U*A*CLTD	
U	0.58 Btu/sq.ft F h
A	18 sq.m
	193.68 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	29 เวลา 1500 type C
LM	-1 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F

CLTDcorr	23.8
q_E-wall_op	2673.55872 Btu/h

rm_11

wall
W-wall
ผนังทึบ

q=U*A*CLTD

U	0.58 Btu/sq.ft F h
A	18 sq.m
	193.68 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	14 เวลา 1500 type C
LM	-1 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	14.05
q_W-wall_op	1578.29832 Btu/h

rm_12

ceiling

q=U*A*TD

q/A=U*TD

TD	1.66 F
U	0.369 Btu/sq.ft F h
A	48 sq.m
	516.48 sq.ft
q/A	0.61254 Btu/sq.ft
q_ceiling	316.3646592 Btu/h

rm_12

floor

q=U*A*TD

q/A=U*TD

TD	1.66 F
U	0.369 Btu/sq.ft F h
A	48 sq.m
	516.48 sq.ft
q/A	0.61254 Btu/sq.ft
q_floor	316.3646592 Btu/h

rm_12

wall
N-wall
ผนังทึบ

q=U*A*CLTD

U	0.58 Btu/sq.ft F h
A	16 sq.m
	172.16 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	10 เวลา 1500 type C
LM	6 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	16
q_N-wall_op	1597.6448 Btu/h

rm_12

N-wall	
หน้าต่าง	conduction

q=U*A*CLTD

U	0.619
A	8 sq.m
	86.08 sq.ft

CLTD	14
q	745.96928 Btu/h

หน้าต่าง	solar

q=A*SC*SHGF*CLF

A	8 sq.m
	86.08 sq.ft
SC	0.96
SHGF	45
CLF	0.82
q	3049.29792 Btu/h

q_กระจก รวม	3795.2672 Btu/h

rm_12

wall
S-wall
ผนังทึบ

q=U*A*CLTD

U	0.58 Btu/sq.ft F h
A	20 sq.m
	215.2 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	17 เวลา 1500 type C
LM	-7 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	12.1
q_S-wall_op	1510.2736 Btu/h

rm_12

S-wall

ประตู	
q=U*A*CLTD	
U	0.418 Btu/sq.ft F h
A	4 sq.m
	43.04 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	17 เวลา 1500 type C
LM	-7 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	12.1
q_ประตู	217.687712 Btu/h

rm_12

wall
E-wall
ผนังทึบ

q=U*A*CLTD	
U	0.58 Btu/sq.ft F h
A	18 sq.m
	193.68 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	29 เวลา 1500 type C
LM	-1 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	23.8
q_E-wall_op	2673.55872 Btu/h

rm_12

wall

W-wall		
ผนังทึบ		
q=U*A*CLTD		
U	0.58	Btu/sq.ft F h
A	18	sq.m
	193.68	sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)		
CLTD	14	เวลา 1500 type C
LM	-1	Jun
K	0.65	light color-rural area
(78-Tr)+(To-85)	5.6	F
CLTDcorr	14.05	
q_W-wall_op	1578.29832	Btu/h

rm_13

roof		
q=U*A*CLTD		
U	0.58	Btu/sq.ft F h
A	48	sq.m
	516.48	sq.ft
CLTDcorr = [(CLTD+LM)*K+(78-Tr)+(To-85)]*f		
CLTD	74	เวลา 1500 type C
LM	0	Jun
K	0.65	light color-rural area
(78-Tr)+(To-85)	5.6	F
f	0.75	positive ventilation
CLTDcorr	40.275	
q_roof	12064.71456	Btu/h

rm_13

floor

q=U*A*TD

q/A=U*TD

TD	1.66 F
U	0.369 Btu/sq.ft F h
A	48 sq.m
	516.48 sq.ft
q/A	0.61254 Btu/sq.ft
q_floor	316.3646592 Btu/h

rm_13

wall
N-wall
ผนังทึบ

q=U*A*CLTD

U	0.58 Btu/sq.ft F h
A	16 sq.m
	172.16 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	10 เวลา 1500 type C
LM	6 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	16
q_N-wall_op	1597.6448 Btu/h

rm_13

N-wall	
หน้าต่าง	conduction

q=U*A*CLTD

U	0.619
A	8 sq.m
	86.08 sq.ft

CLTD	14
q	745.96928 Btu/h

หน้าต่าง	solar

q=A*SC*SHGF*CLF

A	8 sq.m
	86.08 sq.ft
SC	0.96
SHGF	45
CLF	0.82
q	3049.29792 Btu/h

q_กระจก รวม	3795.2672 Btu/h

rm_13

wall
S-wall
ผนังทึบ

q=U*A*CLTD

U	0.58 Btu/sq.ft F h
A	20 sq.m
	215.2 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	17 เวลา 1500 type C
LM	-7 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	12.1
q_S-wall_op	1510.2736 Btu/h

rm_13

S-wall

ประตู	
q=U*A*CLTD	
U	0.418 Btu/sq.ft F h
A	4 sq.m
	43.04 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	17 เวลา 1500 type C
LM	-7 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	12.1
q_ประตู	217.687712 Btu/h

rm_13

wall
E-wall
ผนังทึบ

q=U*A*CLTD	
U	0.58 Btu/sq.ft F h
A	18 sq.m
	193.68 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	29 เวลา 1500 type C
LM	-1 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	23.8
q_E-wall_op	2673.55872 Btu/h

rm_13

wall

W-wall		
ผนังทึบ		
q=U*A*CLTD		
U	0.58	Btu/sq.ft F h
A	18	sq.m
	193.68	sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)		
CLTD	14	เวลา 1500 type C
LM	-1	Jun
K	0.65	light color-rural area
(78-Tr)+(To-85)	5.6	F
CLTDcorr	14.05	
q_W-wall_op	1578.29832	Btu/h

อาคารกรณีที่ 2 อาคารทดสอบ

rm_21	53.8 sq.ft
roof	
q=U*A*CLTD	
U	0.03 Btu/sq.ft F h
A	2 sq.m
	21.52 sq.ft
CLTDcorr = [(CLTD+LM)*K+(78-Tr)+(To-85)]*f	
CLTD	77 เวลา 1500 type C
LM	0 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
f	0.75 positive ventilation
CLTDcorr	41.7375
q_roof	26.94573 Btu/h

rm_21	
wall	
N-wall	
ผนังทึบ	
q=U*A*CLTD	
U	0.04 Btu/sq.ft F h
A	1 sq.m
	10.76 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	10 เวลา 1500 type C
LM	6 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F

CLTDcorr	16
q_N-wall_op	6.8864 Btu/h

rm_21

N-wall	
หน้าต่าง	conduction

q=U*A*CLTD

U	0.619
A	0.5 sq.m
	5.38 sq.ft
CLTD	14
q	46.62308 Btu/h

หน้าต่าง	solar

q=A*SC*SHGF*CLF

A	0.5 sq.m
	5.38 sq.ft
SC	0.96
SHGF	45
CLF	0.82
q	190.58112 Btu/h

q_กระจก รวม	237.2042 Btu/h

rm_21

wall	
S-wall	
ผนังทึบ	

q=U*A*CLTD

U	0.04 Btu/sq.ft F h
A	1.64 sq.m
	17.6464 sq.ft

CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	17 เวลา 1500 type C
LM	-7 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	12.1
q_S-wall_op	8.5408576 Btu/h

rm_21

S-wall
ประตู

q=U*A*CLTD	
U	0.19 Btu/sq.ft F h
A	0.36 sq.m
	3.8736 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	17 เวลา 1500 type C
LM	-7 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	12.1
q_ประตู	8.9054064 Btu/h

rm_21

wall
E-wall
ผนังทึบ

q=U*A*CLTD	
U	0.04 Btu/sq.ft F h
A	2.5 sq.m
	26.9 sq.ft

CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	29 เวลา 1500 type C
LM	-1 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	23.8
q_E-wall_op	25.6088 Btu/h

rm_21

wall
W-wall
ผนังทึบ

q=U*A*CLTD	
U	0.04 Btu/sq.ft F h
A	2.5 sq.m
	26.9 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	14 เวลา 1500 type C
LM	-1 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	14.05
q_W-wall_op	15.1178 Btu/h

rm_22 53.8 sq.ft

roof

q=U*A*CLTD	
U	0.03 Btu/sq.ft F h
A	5 sq.m
	53.8 sq.ft
CLTDcorr = [(CLTD+LM)*K+(78-Tr)+(To-85)]*f	

CLTD	77 เวลา 1500 type C
LM	0 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
f	0.75 positive ventilation
CLTDcorr	41.7375
q_roof	67.364325 Btu/h

rm_22

floor

q=U*A*TD

q/A=U*TD

TD	1.66 F
U	0.369 Btu/sq.ft F h
A	5 sq.m
	53.8 sq.ft
q/A	0.61254 Btu/sq.ft
q_floor	32.954652 Btu/h

rm_22

wall
N-wall
ผนังทึบ

q=U*A*CLTD

U	0.04 Btu/sq.ft F h
A	1.4 sq.m
	15.064 sq.ft

CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)

CLTD	10 เวลา 1500 type C
LM	6 Jun
K	0.65 light color-rural area

(78-Tr)+(To-85)	5.6 F
CLTDcorr	16
q_N-wall_op	9.64096 Btu/h

rm_22

N-wall	
หน้าต่าง	conduction

q=U*A*CLTD

U	0.619
A	0.5 sq.m
	5.38 sq.ft
CLTD	14
q	46.62308 Btu/h

หน้าต่าง	solar

q=A*SC*SHGF*CLF

A	0.5 sq.m
	5.38 sq.ft
SC	0.96
SHGF	45
CLF	0.82
q	190.58112 Btu/h

q_กระจก รวม	237.2042 Btu/h

rm_22

wall
S-wall
ผนังทึบ

q=U*A*CLTD

U	0.04 Btu/sq.ft F h
A	2.04 sq.m

	21.9504 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	17 เวลา 1500 type C
LM	-7 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	12.1
q_S-wall_op	10.6239936 Btu/h

rm_22

S-wall
ประตู

q=U*A*CLTD	
U	0.19 Btu/sq.ft F h
A	0.36 sq.m
	3.8736 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	17 เวลา 1500 type C
LM	-7 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	12.1
q_ประตู	8.9054064 Btu/h

rm_22

wall
E-wall
ผนังทึบ

q=U*A*CLTD	
U	0.04 Btu/sq.ft F h
A	3 sq.m

	32.28 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	29 เวลา 1500 type C
LM	-1 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	23.8
q_E-wall_op	30.73056 Btu/h

rm_22

wall
W-wall
ผนังทึบ

q=U*A*CLTD	
U	0.04 Btu/sq.ft F h
A	3 sq.m
	32.28 sq.ft
CLTDcorr = (CLTD+LM)*K+(78-Tr)+(To-85)	
CLTD	14 เวลา 1500 type C
LM	-1 Jun
K	0.65 light color-rural area
(78-Tr)+(To-85)	5.6 F
CLTDcorr	14.05
q_W-wall_op	18.14136 Btu/h

infiltration : sensible heat

q=(v)(1.08)delta T

v=(ACH)(rm volume)/60min/h

case 1	
rm_area	48 m2
ACH	0.6 Loose
rm volume	5086.08 ft3
v	50.8608

case 2	
rm_area	5 m2
ACH	0.5 Medium
rm volume	176.6 ft3
v	1.471667

case 1	
q	91.18324 Btu/h
q/a	1.899651 Btu/h sq.m

case 2	
q	2.638404 Btu/h
q/a	0.527681 Btu/h sq.m

internal heat gain

case 1	internal heat gain	W/sq m	Btu/h sq m
1	people	107.14	365.5617
2	lighting	16	54.592
รวม		123.14	420.1537

case 2	internal heat gain	W/sq m	Btu/h sq m
1	people	107.14	365.5617
2	lighting	6.09	20.77908
รวม		113.23	386.3408

ประวัติผู้เขียนวิทยานิพนธ์

นางสาวสุธีวัน โล่ห์สุวรรณ เกิดวันที่ 19 มีนาคม พ.ศ. 2520 ที่กรุงเทพมหานคร สำเร็จการศึกษาปริญญาตรี สถาปัตยกรรมศาสตร์บัณฑิต เกียรตินิยมอันดับ 2 ภาควิชาสถาปัตยกรรม คณะสถาปัตยกรรมศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย ในปีการศึกษา 2540 และเข้าศึกษาต่อในหลักสูตรสถาปัตยกรรมศาสตร์มหาบัณฑิต ที่จุฬาลงกรณ์มหาวิทยาลัย เมื่อ พ.ศ. 2543