service that already provided by Sinergi.co might be the reason of trust&reactivity and materiality negatively impact customer loyalty.

CHAPTER V

CONCLUSION

This chapter is summary of all findings on the chapter IV. This chapter will discuss in detail about the conclusion of all findings in this research, managerial implication, limitation of the research and suggestion for the future research.

5.1. Conclusion

After examine the data analysis and discussion, from this research shows that:

1. All of the respondents from customer of Sinergi.co and according to the respondent's profile, most of respondents were man with 55.3% and 44.7% of respondents were woman.

2. The respondent's dominated by people aged 21-25 with 56.7%, people aged ≤20 is 22.7%, people aged 26-30 is 14%, and people aged above 30 is 6.7%.

3. Most of respondents are student or fresh graduate, with total 60%, and the rest are government/non-government employee is 24.7%, and others is 15.3%.

4. The respondent's educational background is dominated by Senior High School with 48%, Junior High School is 2.0%, Diploma is 7.3%, Bachelor is 33.3%, and Magister is 8.7%. Moreover, the respondents with Doctor educational background is the lowest amount with 0.7% or 1 person.

5. Service quality dimensions have a significant and positive impact on customer satisfaction simultaneously.

6. Based on the multiple regression result of service quality dimensions towards customer satisfaction, materiality is the most dimension that impacts customer satisfaction, and assurance and sympathy is the only dimension that does not influence customer satisfaction.

7. Service quality dimensions have a significant and positive impact on customer loyalty simultaneously.

8. Based on the multiple regression result of service quality dimension on customer loyalty, there are trust and reactivity and materiality have a negative and significant influence on customer loyalty, in addition assurance and sympathy does not impact customer loyalty.

9. Customer satisfaction has a positive and strong impact on customer loyalty.

5.2. Managerial Implication

The results of research conducted on the influence of service quality dimensions on consumer satisfaction and loyalty are expected to bring many benefits to various parties such as business companies, as well as students studying in the realm of management. Based on the results discussed in the previous chapters, the researcher describes several managerial implications as follows:

For the company in food and beverages industry service quality is so important to gain customer satisfaction. If the company wants to gain customer satisfaction and loyalty, the company needs to fulfil the customer needs first. Service quality dimensions has a positive impact on customer satisfaction and loyalty simultaneously.

The food and beverages industry need to gain customer trust to get customer satisfaction and loyalty. The trust that given to customer such as make a reservation, make a tasty food, make a comfortable place. The reactivity of waitress also needed to gain customer satisfaction and loyalty. Answer immediately what customer asks, what customer needed and wanted to consume, and help as customer requested. As one of big coffee shop in Yogyakarta, Sinergi.co must always maintains the trust and responsive to what customer needs.

Taste has a very important role in food and beverages industry. Although the place is comfortable, but if the taste is not satisfying, the customer might be not satisfied and there will be no loyalty from the customer. Sinergi.co is giving a good taste of their foods and beverages to

gain customer satisfaction and loyalty. However, Sinergi.co must always maintains the taste to always be consistent.

A store material is one of perceptible thing by the customer towards the service quality of the store. The appropriateness of the service provider wear, environment, the store facilities and equipment could be one of the considerations of gain customer satisfaction and loyalty. Sinergi.co needs to arrange and make a good appearance to customer. Sinergi.co has always to understand to arrange ornaments of the store to always refresh the look of Sinergi.co.

As the city that has thousands of coffee shop, store atmosphere is one of an important consideration to win the business competition. Background music, illumination, air freshener, and temperature of Sinergi.co is well organized. Sinergi.co must maintains this to always make customer satisfied and gain customer loyalty.

5.3. Research Limitation

There is some limitation of analysis of this research study. It can be from variables, length period, the research method, and so on. Those limitation are as follows:

1. The sample and population of this research is only the customer of Sinergi.co coffee shop.
2. The study only took a sample of 150 respondents, the least number of samples taken due to the limited time of the researcher.
3. There are some items of the questionnaire that confuse the respondents.

5.4. Suggestion for Further Research

Below is the suggestion that the researcher can give as a reference for future research that will be done, they are:

1. It will be better for future research to use the customer from another coffee shop as the respondent.

2. Future research is suggested to take more respondents to get better results.

3. Future research is suggested to provide a vocabulary that is easier to be understood in the questionnaire/translated questionnaire.

4. This research is using the store atmosphere as one added dimension in service quality. For future research, it will be better if added more dimensions such as price.

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APPENDIX

APPENDIX 1

QUESTIONNAIRE

LETTER OF APPLICATION FOR FILLING QUESTIONNAIRE

With respect,

I am Lydia Carolina Panggabean (141221618), to fulfill some of the requirements in completing the Management Study Program at the Faculty of Business and Economics at the University of Atma Jaya Yogyakarta, I need some information as thesis writing material.

In connection with that, I request your willingness to fill out this questionnaire by the instructions for filling out. This questionnaire is designed to assess service quality for customer satisfaction and loyalty at Sinergi, co.

I will use all the information obtained from this questionnaire for research purposes only and I will maintain its confidentiality under research ethics. I hope that you can return this questionnaire.

For your willingness to take the time to fill out this questionnaire, I thank you.

<div align="right">

Yogyakarta, July 2019

Lydia Carolina Panggabean

(141221618)

</div>

I. **Please give cross (X) to the most appropriate choice.**

  1. Have you ever bought food/drinks at Sinergi.co?

     a. Yes

     b. No (stop here)

  2. How many times you come to Sinergi.co for the last 6 months?

     a. This is my first time

       (stop here)

     b. 2 times or more

II. **Please give cross (X) to the most appropriate choice.**

  1. Gender

     a. Male

     b. Female

2. Age:.......years old

3. Occupation

    a. Student (including fresh graduate)

    b. Government/non-government employee

    c. Others

4. Level of Education

    a. Elementary School

    b. Junior High School

    c. Senior High School

    d. Diploma

    e. Bachelor

    f. Magister

    g. Doctor

III.   **Please give cross (X) to the most appropriate choice.**

Likert Scale

SA	Strongly Agree
A	Agree
N	Neutral
NA	Not Agree
SNA	Strongly Not Agree

A)   **Service Quality**

a. Trust and Reactivity

STATEMENT	SA	A	N	NA	SNA
Sinergi.co faithfully treating service customer demanded.					

STATEMENT					
Sinergi.co responding immediately to customer's question.					
Sinergi.co providing rapid service in order of visiting customer.					
Sinergi.co keeping promise made by customers.					
Sinergi.co responding immediately to customer's demands.					
Sinergi.co have attitude to help customers willingly.					
Sinergi.co treating customer's demand accurately.					
I give the trust towards raw materials and cooking procedures in Sinergi.co					

b. Assurance and Sympathy

STATEMENT	SA	A	N	NA	SNA
Sinergi.co have a deep interest towards individual customer.					
Sinergi.co accomplishing faithfully to customer's demand.					
Sinergi.co carrying out service with sympathy.					
Sinergi.co being friendly and thoughtful.					
Sinergi.co understanding customer's needs and emotion.					
Sinergi.co being safe from all situation such as fire.					
I give the trust towards hygiene and safety in Sinergi.co					

STATEMENT	SA	A	N	NA	SNA
Sinergi.co have the skill to make coffee and beverage well					

c. Taste

STATEMENT	SA	A	N	NA	SNA
Taste of beverages in Sinergi.co always good					
Taste of foods excluding coffee and beverages in Sinergi.co always good					
Tasty products of Sinergi.co overall					
Taste of coffee in Sinergi.co always consistent					

d. Materiality

STATEMENT	SA	A	N	NA	SNA
Sinergi.co coffee shop has good facilities and equipment					
Interior of Sinergi.co coffee shop coffee shop makes me comfortable					
Good physical environment in Sinergi.co					
Attire and appearance of workers in Sinergi.co is appropriate					

e. Store atmosphere

STATEMENT	SA	A	N	NA	SNA
Sinergi.co has a fine interior and style.					
Indoor ornaments of Sinergi.co is fine.					

STATEMENT					
Arrangement of furniture's such as table and chair are neatly arranged in Sinergi.co.					
The indoor illumination in Sinergi.co is well organized and enough.					
Freshness of indoor facilities of Sinergi.co is managed very well.					

B). Customer Satisfaction

STATEMENT	SA	A	N	NA	SNA
I feel satisfied with this coffee shop					
I feel satisfied with the food and beverages that provided in Sinergi.co					
I feel satisfied with the environment in Sinergi.co.					
I feel satisfied with overall service of Sinergi.co					

C). Customer Loyalty

STATEMENT	SA	A	N	NA	SNA
I will continuously buy from Sinergi.co					
I will recommend Sinergi.co to my family and people closest to you					
Intention of continuous use even if it is expensive compared to other coffee shops					
Intention to continuous used even if the cost is high					

KUISIONER

SURAT PERMOHONAN PENGISIAN

Hal: Permohonan Pengisian Kuesioner

Yth: Bapak/Ibu Responden

Di Tempat.

Dengan hormat,

Saya Lydia Carolina Panggabean (141221618), untuk memenuhi sebagian persyaratan dalam penyelesaian pendidikan Program Studi Manajemen Fakultas Bisnis dan Ekonomika Universitas Atma Jaya Yogyakarta, saya memerlukan beberapa informasi sebagai bahan penulisan skripsi.

Sehubungan dengan itu, saya memohon kesediaan Bapak/Ibu/Saudara untuk mengisi kuesioner ini sesuai dengan petunjuk pengisiannya. Kuesioner ini didesain untuk menilai kualitas servis terhadap kepuasan dan kesetiaan pelanggan di Sinergi,co.

Seluruh informasi yang diperoleh dari kuesioner ini hanya akan saya gunakan untuk keperluan penelitian saja dan saya akan menjaga kerahasiaannya sesuai dengan etika penelitian. Saya harap Bapak/Ibu/Saudara dapat mengembalikan kuesioner ini.

Atas kesediaan Bapak/Ibu/Saudara yang telah meluangkan waktu untuk mengisi kuesioner ini, saya ucapkan terima kasih.

Yogyakarta, Juli 2019

Lydia Carolina Panggabean

(141221618)

I. **Mohon beri tanda silang (X) pada pilihan yang paling tepat.**

1. Apakah anda pernah membeli makanan/minuman di Sinergi.co?
   a. Ya
   b. Tidak (berhenti di sini)
2. Sudah berapa kali anda pergi ke Sinergi.co dalam 6 bulan terakhir?
   a. Ini adalah pertama kalinya untuk saya (berhenti di sini)
   b. 2 kali atau lebih

II. Mohon beri tanda silang (X) terhadap pilihan yang paling tepat.

1. Jenis Kelamin
    a. Laki-laki
    b. Perempuan

3. Usia: ... tahun

4. Pekerjaan
    a. Mahasiswa (termasuk *fresh graduate*)
    b. Karyawan perusahaan
    c. .... (dan lain-lain)

5. Tingkat Pendidikan Terakhir
    a. SD
    b. SMP
    c. SMA
    d. D1/D2/D3
    e. S1
    f. S2
    g. S3

III. Mohon beri tanda centang (√) pada pilihan yang menurut anda paling tepat.

Keterangan:

Skala Likert

SS	Sangat Setuju
S	Setuju
N	Netral
TS	Tidak Setuju
STS	Sangat Tidak Setuju

A) *Service Quality*

a. Trust and Reactivity

No.	PERNYATAAN	SS	S	N	TS	STS
1.	Sinergi.co dengan setia melakukan servis yang diminta oleh pelanggan.					
2.	Sinergi.co merespon pertanyaan pelanggan dengan segera.					
3.	Sinergi.co memberikan layanan cepat kepada pelanggan yang datang					
4.	Sinergi.co menepati janji yang dibuat oleh pelanggan.					
5.	Sinergi.co menanggapi permintaan pelanggan dengan segera.					
6.	Sinergi.co memiliki sikap untuk membantu pelanggan dengan sukarela.					
7.	Sinergi.co melakukan permintaan pelanggan dengan tepat.					
8.	Saya percaya terhadap bahan baku dan prosedur memasak di Sinergi.co.					

b. Assurance and Sympathy

No.	PERNYATAAN	SS	S	N	TS	STS
1.	Sinergi.co memiliki minat yang mendalam terhadap individu pelanggan					
2.	Sinergi.co dengan setia menyelesaikan apa yang pelanggan minta.					
3.	Sinergi.co melaksanakan layanan kepada pelanggan dengan simpatik.					
4.	Sinergi.co bersikap ramah dan penuh perhatian kepada pelanggan.					
5.	Sinergi.co memahami kebutuhan dan emosi					

No.		SS	S	N	TS	STS
	pelanggan.					
6.	Sinergi.co aman dari segala situasi seperti kebakaran.					
7.	Saya memberikan kepercayaan terhadap kebersihan dan keamanan di Sinergi.co.					
8.	Barista di Sinergi.co memiliki keterampilan membuat kopi dan minuman lain dengan baik.					

    c. Taste

No.	PERNYATAAN	SS	S	N	TS	STS
1.	Rasa minuman di Sinergi.co selalu enak.					
2.	Rasa makanan di Sinergi.co selalu enak.					
3.	Produk yang disediakan oleh Sinergi.co lezat secara keseluruhan.					
4.	Rasa kopi di Sinergi.co selalu enak.					

    d. Materiality

No.	PERNYATAAN	SS	S	N	TS	STS
1.	Sinergi.co memiliki peralatan dan fasilitas yang baik.					
2.	Sinergi.co memiliki suasana toko dan interior desain yang baik.					
3.	Sinergi.co memiliki lingkungan fisik yang baik.					
4.	Pekerja di Sinergi.co menggunakan pakaian dan berpenampilan dengan layak.					

    e. Store atmosphere

No.	PERNYATAAN	SS	S	N	TS	STS
1.	Musik yang diputar di Sinergi.co cukup menghibur.					
2.	Penerangan dalam ruangan di Sinergi.co terorganisir dengan baik dan cukup.					
3.	Pengharum ruangan di Sinergi.co selalu mengharumkan ruangan.					
4.	Suhu udara dari fasilitas dalam ruangan di Sinergo.co dikelola dengan baik.					

B) *Customer Satisfaction*

No.	PERNYATAAN	SS	S	N	TS	STS
1.	Saya merasa puas dengan pelayanan dan fasilitas di Sinergi.co.					
2.	Saya merasa puas dengan makanan dan minuman yang disediakan oleh Sinergi.co.					
3.	Saya merasa puas dengan lingkungan di Sinergi.co.					
4.	Saya merasa puas dengan keseluruhan servis yang disediakan oleh Sinergi.co.					

C) *Customer Loyalty*

No.	PERNYATAAN	SS	S	N	TS	STS
1.	Saya akan membeli dari Sinergi.co secara terus-menerus.					
2.	Saya akan merekomendasikan Sinergi.co kepada keluarga dan orang-orang terdekat saya.					
3.	Saya berniat untuk berbelanja di Sinergi.co lagi, bahkan jika harganya mahal.					
4.	Saya berniat untuk membeli lagi di Sinergi.co, bahkan walaupun itu lebih mahal dibandingkan					

	kedai kopi lainnya.						

APPENDIX 2

RESPONDENTS CHARACTERISTIC

No	Gender	Age	Occupation	Education Level
1	Male	23	Government/non-government employee	Bachelor
2	Male	23	Student(including fresh graduate)	Bachelor
3	Female	22	Student(including fresh graduate)	Bachelor
4	Male	21	Student(including fresh graduate)	Diploma
5	Male	24	Government/non-government employee)	Bachelor
6	Male	25	Government/non-government employee)	Bachelor
7	Female	25	Student(including fresh graduate)	Bachelor
8	Male	23	Government/non-government employee)	Bachelor
9	Male	23	Government/non-government employee)	Bachelor
10	Male	28	Government/non-government employee)	Magister
11	Female	22	Government/non-government employee)	Bachelor

12	Male	26	Government/non-government employee)	Magister
13	Male	25	Government/non-government employee)	Bachelor
14	Female	21	Student(including fresh graduate)	Bachelor
15	Female	27	Government/non-government employee)	Bachelor
16	Male	27	Government/non-government employee)	Bachelor
17	Male	30	Government/non-government employee)	Bachelor
18	Male	28	Government/non-government employee)	Diploma
19	Male	25	Government/non-government employee)	Bachelor
20	Female	30	Entrepreneur	Magister
21	Male	21	Student(including fresh graduate)	Senior High School
22	Female	21	Student(including fresh graduate)	Senior High School
23	Female	22	Student(including fresh graduate)	Senior High School
24	Male	23	Barista	Bachelor
25	Male	27	Government/non-government employee)	Senior High School
26	Male	20	Student(including fresh graduate)	Senior High School
27	Male	19	Government/non-government employee)	Bachelor
28	Female	20	Student(including fresh graduate)	Bachelor
29	Female	24	Government/non-government employee)	Bachelor
30	Female	26	Student(including fresh graduate)	Magister
31	Male	28	Government/non-government employee)	Magister
32	Female	25	Government/non-government employee)	Bachelor
33	Male	22	Student(including fresh graduate)	Diploma
34	Male	22	Student(including fresh graduate)	Bachelor
35	Female	20	Student(including fresh graduate)	Senior High School
36	Male	22	Student(including fresh graduate)	Bachelor
37	Female	20	Student(including fresh graduate)	Senior High School
38	Female	21	Student(including fresh graduate)	Bachelor
39	Male	21	Student(including fresh graduate)	Bachelor
40	Male	23	Student(including fresh graduate)	Bachelor
41	Female	21	Student(including fresh graduate)	Bachelor
42	Female	21	Student(including fresh graduate)	Bachelor
43	Male	21	Student(including fresh graduate)	Bachelor
44	Female	20	Student(including fresh graduate)	Senior High School
45	Female	21	Student(including fresh graduate)	Senior High School
46	Male	22	Student(including fresh graduate)	Senior High School
47	Female	23	Student(including fresh graduate)	Senior High School
48	Male	23	Student(including fresh graduate)	Senior High School
49	Male	21	Student(including fresh graduate)	Senior High School
50	Female	21	Student(including fresh graduate)	Senior High School
51	Male	41	Government/non-government employee)	Magister

52	Female	21	Student(including fresh graduate)	Senior High School
53	Female	18	Student(including fresh graduate)	Senior High School
54	Male	23	Entrepreneur	Senior High School
55	Male	19	Freelance	Junior High School
56	Male	20	Freelance	Junior High School
57	Female	31	Entrepreneur	Diploma
58	Male	38	Barista	Senior High School
59	Female	18	Student(including fresh graduate)	Senior High School
60	Male	26	Government/non-government employee)	Bachelor
61	Female	28	Government/non-government employee)	Magister
62	Female	24	Student(including fresh graduate)	Senior High School
63	Female	25	Student(including fresh graduate)	Senior High School
64	Female	19	Student(including fresh graduate)	Bachelor
65	Female	19	Student(including fresh graduate)	Senior High School
66	Female	24	Student(including fresh graduate)	Senior High School
67	Female	18	Student(including fresh graduate)	Senior High School
68	Female	26	Entrepreneur	Senior High School
69	Female	24	Student(including fresh graduate)	Senior High School
70	Male	27	Government/non-government employee)	Diploma
71	Female	23	Student(including fresh graduate)	Senior High School
72	Female	23	Student(including fresh graduate)	Senior High School
73	Female	29	Student(including fresh graduate)	Bachelor
74	Male	23	Student(including fresh graduate)	Magister
75	Female	22	Student(including fresh graduate)	Senior High School
76	Female	27	Government/non-government employee)	Bachelor
77	Male	34	Photographer	Diploma
78	Male	32	Editor	Senior High School
79	Female	20	Government/non-government employee)	Bachelor
80	Male	32	Entrepreneur	Magister
81	Male	21	Student(including fresh graduate)	Bachelor
82	Male	20	Student(including fresh graduate)	Senior High School
83	Female	22	Student(including fresh graduate)	Bachelor
84	Male	20	Freelance	Senior High School
85	Male	29	Government/non-government employee)	Senior High School
86	Male	27	Government/non-government employee)	Senior High School
87	Male	22	Student(including fresh graduate)	Senior High School
88	Male	33	Others	Senior High School
89	Male	26	Government/non-government employee)	Bachelor
90	Male	35	Photographer	Bachelor
91	Female	26	Government/non-government employee)	Magister

92	Male	20	Student(including fresh graduate)	Senior High School
93	Female	21	Student(including fresh graduate)	Senior High School
94	Male	40	Government/non-government employee)	Magister
95	Male	22	Student(including fresh graduate)	Senior High School
96	Male	21	Student(including fresh graduate)	Bachelor
97	Male	24	Freelance	Bachelor
98	Male	20	Student(including fresh graduate)	Senior High School
99	Male	22	Others	Bachelor
100	Male	29	Government/non-government employee)	Bachelor
101	Female	23	Student(including fresh graduate)	Senior High School
102	Female	21	Student(including fresh graduate)	Senior High School
103	Male	21	Government/non-government employee)	Magister
104	Female	22	Government/non-government employee)	Bachelor
105	Male	23	Student(including fresh graduate)	Senior High School
106	Female	20	Student(including fresh graduate)	Senior High School
107	Female	23	Student(including fresh graduate)	Senior High School
108	Male	25	Others	Bachelor
109	Female	22	Student(including fresh graduate)	Senior High School
110	Female	21	Student(including fresh graduate)	Bachelor
111	Female	19	Student(including fresh graduate)	Senior High School
112	Female	24	Freelance	Diploma
113	Male	21	Student(including fresh graduate)	Bachelor
114	Male	31	Government/non-government employee)	Doctor
115	Male	24	Student(including fresh graduate)	Bachelor
116	Female	19	Student(including fresh graduate)	Senior High School
117	Female	21	Model	Senior High School
118	Male	17	Student(including fresh graduate)	Senior High School
119	Male	22	Student(including fresh graduate)	Senior High School
120	Female	21	Student(including fresh graduate)	Senior High School
121	Male	18	Student(including fresh graduate)	Senior High School
122	Male	20	Student(including fresh graduate)	Senior High School
123	Female	21	Student(including fresh graduate)	Senior High School
124	Female	20	Student(including fresh graduate)	Senior High School
125	Male	18	Others	Senior High School
126	Female	21	Student(including fresh graduate)	Senior High School
127	Female	23	Student(including fresh graduate)	Diploma
128	Male	21	Student(including fresh graduate)	Senior High School
129	Female	21	Student(including fresh graduate)	Senior High School
130	Male	20	Student(including fresh graduate)	Senior High School
131	Male	21	Student(including fresh graduate)	Senior High School

132	Male	23	Student(including fresh graduate)	Senior High School
133	Male	22	Student(including fresh graduate)	Diploma
134	Male	21	Student(including fresh graduate)	Senior High School
135	Male	17	Student(including fresh graduate)	Senior High School
136	Male	17	Student(including fresh graduate)	Senior High School
137	Male	21	Student(including fresh graduate)	Diploma
138	Male	24	Government/non-government employee)	Bachelor
139	Male	26	Government/non-government employee)	Diploma
140	Female	20	Student(including fresh graduate)	Senior High School
141	Female	21	Government/non-government employee)	Magister
142	Female	22	Others	Bachelor
143	Female	18	Student(including fresh graduate)	Senior High School
144	Male	16	Others	Junior High School
145	Male	21	Student(including fresh graduate)	Senior High School
146	Female	21	Student(including fresh graduate)	Senior High School
147	Female	22	Student(including fresh graduate)	Senior High School
148	Female	21	Others	Bachelor
149	Male	21	Student(including fresh graduate)	Bachelor
150	Male	21	Student(including fresh graduate)	Senior High School

APPENDIX 3

DATA OF RESPONDENTS

1. DATA OF RESPONDENTS FOR ITEM VARIABLES

a. Service Quality (Trust&Reactivity)

No.	Trust and Reactivity (T&R)								Total T&R
	T&R 1	T&R 2	T&R 3	T&R 4	T&R 5	T&R 6	T&R 7	T&R 8	
1	4	3	4	3	4	3	4	5	30
2	4	4	3	3	3	4	4	3	28
3	4	5	5	5	3	4	4	4	34
4	4	4	4	4	5	5	3	4	33
5	4	4	4	4	4	4	4	4	32
6	5	4	5	4	5	5	5	5	38

7	4	3	3	4	4	2	2	2	24
8	4	3	3	4	4	3	4	4	29
9	4	5	5	4	5	4	5	5	37
10	4	3	3	4	4	3	3	4	28
11	4	3	4	4	3	4	4	3	29
12	3	4	3	3	4	4	4	4	29
13	4	4	4	4	4	4	4	3	31
14	4	4	4	4	4	4	4	4	32
15	4	3	4	5	4	3	4	4	31
16	4	4	4	3	4	4	3	4	30
17	4	4	4	3	4	4	4	3	30
18	5	5	5	3	5	5	5	3	36
19	4	4	4	3	4	4	4	4	31
20	4	3	4	3	4	3	5	3	29
21	4	3	4	3	3	4	5	2	28
22	3	3	4	3	4	3	4	4	28
23	4	3	4	4	5	4	5	3	32
24	4	4	4	4	4	4	4	4	32
25	2	5	4	4	5	4	4	3	31
26	5	4	4	4	4	4	3	4	32
27	2	4	4	3	4	2	4	3	26
28	4	4	4	4	4	4	4	3	31
29	4	4	4	4	4	4	4	4	32
30	3	4	4	3	4	4	4	4	30
31	5	5	5	5	5	5	5	5	40
32	3	4	4	3	4	4	4	4	30
33	5	4	4	4	5	4	4	4	34
34	5	4	5	5	5	5	5	4	38
35	4	3	5	5	4	3	4	3	31
36	2	4	4	3	4	4	4	5	30
37	3	3	4	3	4	4	4	3	28
38	5	5	5	5	5	5	5	5	40
39	3	5	3	4	5	3	5	3	31
40	4	4	4	3	3	4	4	3	29
41	4	4	4	4	4	4	4	4	32
42	4	4	4	4	4	4	4	4	32
43	3	3	4	3	2	2	3	4	24
44	4	4	4	4	4	4	4	4	32
45	4	4	4	4	4	4	4	4	32
46	4	5	4	4	3	3	3	3	29
47	3	3	4	4	3	4	4	4	29
58	5	5	5	4	5	4	5	5	38

49	4	5	5	4	5	4	5	5	37
50	3	3	2	3	3	2	3	4	23
51	4	3	4	3	4	3	4	5	30
52	4	4	3	3	3	4	4	3	28
53	4	5	5	5	3	4	4	4	34
54	4	4	4	4	5	5	3	4	33
55	4	4	4	4	4	4	4	4	32
56	5	4	5	4	5	5	5	5	38
57	4	3	3	4	4	5	5	5	33
58	4	3	3	4	4	3	4	4	29
59	4	5	5	4	5	4	5	5	37
60	4	3	3	4	4	3	3	4	28
61	4	3	4	4	3	4	4	3	29
62	3	4	3	3	4	4	4	4	29
63	4	4	4	4	4	4	4	3	31
64	4	4	4	4	4	4	4	4	32
65	4	3	4	5	4	3	4	4	31
66	4	4	4	3	4	4	3	4	30
67	4	4	4	3	4	4	4	3	30
68	5	5	5	3	5	5	5	3	36
69	4	4	4	3	4	4	4	4	31
70	4	3	4	3	4	3	5	3	29
71	4	3	4	3	3	4	5	5	31
72	3	3	4	3	4	3	4	4	28
73	4	3	4	4	5	4	5	3	32
74	4	4	4	4	4	4	4	4	32
75	3	4	4	3	4	4	4	4	30
76	5	5	5	5	5	5	5	5	40
77	3	4	4	3	4	4	4	4	30
78	5	4	4	4	5	4	4	4	34
79	5	4	5	5	5	5	5	4	38
80	4	4	5	5	4	3	4	3	32
81	2	4	4	3	4	4	4	5	30
82	3	3	4	3	4	4	4	3	28
83	5	5	5	5	5	5	5	5	40
84	3	5	3	4	5	3	5	3	31
85	4	4	4	3	3	4	4	3	29
86	4	4	4	4	4	4	4	4	32
87	3	3	4	3	2	2	3	4	24
88	4	4	4	4	4	4	4	4	32
89	4	4	4	4	4	4	4	4	32
90	4	5	4	4	3	3	3	3	29

91	3	3	4	4	3	4	4	4	29
92	5	5	5	4	5	4	5	5	38
93	4	4	4	4	4	4	4	4	32
94	4	4	3	3	4	4	3	5	30
95	4	3	3	2	4	3	4	4	27
96	3	4	4	4	4	3	3	3	28
97	4	3	3	4	4	3	4	3	28
98	3	3	3	2	4	3	4	2	24
99	5	5	5	3	4	3	4	5	34
100	4	3	4	3	4	3	4	5	30
101	5	4	4	4	4	4	3	4	32
102	2	4	4	3	4	2	4	3	26
103	4	4	4	4	4	4	4	3	31
104	4	5	5	5	5	5	5	5	39
105	4	4	4	4	3	4	3	4	30
106	4	4	4	4	4	4	4	3	31
107	4	4	4	4	4	4	4	4	32
108	5	5	4	4	4	4	3	3	32
109	4	3	4	3	4	4	4	5	31
110	4	3	3	3	4	3	4	3	27
111	4	4	4	3	4	4	3	4	30
112	4	4	4	4	4	3	3	4	30
113	4	3	4	3	3	3	4	5	29
114	4	5	4	3	4	4	4	4	32
115	5	5	4	3	4	5	5	4	35
116	4	3	3	3	3	2	3	4	25
117	5	4	5	4	4	4	4	3	33
118	3	4	3	3	4	3	4	4	28
119	3	3	3	3	4	3	3	4	26

120	4	5	4	3	4	4	4	3	31
121	4	4	4	4	4	4	3	4	31
122	5	3	4	4	4	3	4	4	31
123	3	4	4	3	5	4	4	3	30
124	4	4	5	4	3	3	4	4	31
125	4	4	3	4	4	4	4	3	30
126	3	3	4	4	3	4	3	3	27
127	3	3	3	3	3	3	3	3	24
128	4	4	4	4	4	4	4	4	32
129	4	4	4	4	4	4	4	3	31
130	3	3	3	3	3	3	3	3	24
131	2	2	3	2	2	1	3	2	17
132	4	4	4	2	3	5	3	5	30
133	3	4	4	3	3	2	4	4	27
134	4	3	3	3	4	3	3	4	27
135	4	4	2	2	3	3	2	3	23
136	4	3	3	3	3	4	3	2	25
137	4	3	4	3	2	4	4	3	27
138	4	3	3	4	3	2	2	3	24
139	4	3	4	4	4	4	3	4	30
140	4	3	4	4	3	2	3	2	25
141	4	3	3	4	4	4	3	4	29
142	3	3	4	4	4	4	3	4	29
143	4	3	4	4	4	3	3	3	28
144	4	3	4	4	4	3	4	4	30
14	3	2	3	3	4	3	2	3	23

5								
146	4	4	3	3	4	4	3	5	30
147	4	3	3	2	4	3	4	4	27
148	3	4	4	4	4	3	3	3	28
149	4	3	3	4	4	3	4	3	28
150	3	3	3	2	4	3	4	2	24

b. Service Quality (Assurance&Sympathy)

No.	Assurance and Sympathy (A&S)							Total A&S
	A&S1	A&S5	A&S3	A&S4	A&S5	A&S6	A&S8	
1	4	4	4	4	5	5	5	31
2	4	3	4	3	3	3	3	23
3	3	4	4	5	3	4	5	28
4	3	5	5	5	5	3	3	29
5	4	5	5	5	5	4	3	31
6	4	5	5	5	4	4	4	31
7	3	4	4	4	3	3	2	23
8	4	3	4	3	4	3	3	24
9	4	4	4	4	4	4	4	28
10	4	3	4	4	3	3	4	25
11	3	4	3	4	3	3	4	24
12	3	3	3	4	3	4	4	24
13	3	3	4	4	4	4	4	26
14	4	4	4	4	4	4	4	28
15	3	4	4	4	3	3	4	25
16	3	3	3	4	3	2	4	22
17	3	4	4	4	3	4	3	25
18	4	4	5	5	4	3	5	30
19	3	4	3	3	3	4	4	24
20	3	5	4	4	2	3	3	24

21	4	5	4	5	2	3	3	26
22	3	3	4	4	3	3	5	25
23	3	5	4	4	2	3	4	25
24	4	4	4	4	4	4	4	28
25	4	4	4	4	4	4	4	28
26	3	4	3	4	3	3	4	24
27	2	2	3	2	4	3	3	19
28	3	4	4	4	3	3	3	24
29	3	4	3	3	3	4	4	24
30	3	3	3	4	3	3	2	21
31	5	5	5	5	5	4	5	34
32	3	4	4	4	3	4	4	26
33	3	4	4	3	3	3	4	24
34	4	5	4	5	3	3	4	28
35	3	4	3	4	3	3	4	24
36	3	3	3	4	3	3	4	23
37	4	3	4	5	3	3	3	25
38	5	5	5	5	5	4	5	34
39	4	3	4	5	5	3	3	27
40	3	3	4	4	3	3	4	24
41	4	4	4	4	4	4	4	28
42	3	4	4	4	3	4	4	26
43	4	4	4	4	3	4	4	27
44	4	4	4	4	4	4	4	28
45	4	4	4	4	4	4	4	28
46	4	5	4	4	5	4	4	30
47	3	3	3	4	3	4	4	24
58	5	5	5	5	4	3	5	32
49	4	4	4	4	4	4	4	28
50	3	3	1	2	2	4	5	20
51	4	4	4	4	5	5	5	31
52	4	3	4	3	3	3	3	23
53	3	4	4	5	3	4	5	28
54	3	5	5	5	5	3	3	29
55	4	5	5	5	5	4	3	31
56	4	5	5	5	4	4	4	31
57	3	4	4	4	3	3	5	26
58	4	3	4	3	4	3	3	24
59	4	4	4	4	4	4	4	28
60	4	3	4	4	3	3	4	25
61	3	4	3	4	3	3	4	24
62	3	3	3	4	3	4	4	24

63	3	3	4	4	4	4	4	26
64	4	4	4	4	4	4	4	28
65	3	4	4	4	3	3	4	25
66	3	3	3	4	3	2	4	22
67	3	4	4	4	3	4	3	25
68	4	4	5	5	4	3	5	30
69	3	4	3	3	3	4	4	24
70	3	5	4	4	5	3	3	27
71	4	5	4	5	5	3	3	29
72	3	3	4	4	5	3	5	27
73	3	5	4	4	5	3	4	28
74	3	4	3	3	3	4	4	24
75	3	3	3	4	3	3	2	21
76	5	5	5	5	5	4	5	34
77	3	4	4	4	3	4	4	26
78	3	4	4	3	3	3	4	24
79	4	5	4	5	3	3	4	28
80	3	4	3	4	3	3	4	24
81	3	3	3	4	3	3	4	23
82	4	3	4	5	3	3	3	25
83	5	5	5	5	5	4	5	34
84	4	3	4	5	5	3	3	27
85	3	3	4	4	3	3	4	24
86	3	4	4	4	3	4	4	26
87	4	4	4	4	3	4	4	27
88	4	4	4	4	4	4	4	28
89	4	4	4	4	4	4	4	28
90	4	5	4	4	5	4	4	30
91	3	3	3	4	3	4	4	24
92	5	5	5	5	4	3	5	32
93	4	4	4	4	4	4	4	28
94	4	3	2	4	2	2	3	20
95	3	3	4	2	3	3	3	21
96	3	2	2	2	3	4	2	18
97	4	3	4	4	4	3	3	25
98	2	3	3	3	2	3	2	18
99	3	4	3	5	4	4	5	28
100	4	4	4	4	3	3	5	27
101	3	4	3	4	3	3	4	24
102	2	2	3	2	4	3	3	19
103	3	4	4	4	3	3	3	24
104	4	5	3	4	4	5	4	29

105	4	4	4	4	4	5	4	29
106	4	4	4	4	4	3	4	27
107	3	3	3	4	3	4	3	23
108	3	3	4	4	4	3	3	24
109	4	4	4	5	4	3	5	29
110	3	3	3	4	3	3	4	23
111	3	4	3	4	3	4	4	25
112	3	4	4	4	4	4	5	28
113	3	3	3	4	3	5	4	25
114	4	4	3	5	3	3	4	26
115	3	4	4	4	3	3	4	25
116	3	3	3	3	3	2	4	21
117	4	4	4	5	4	5	5	31
118	3	3	3	4	3	4	2	22
119	3	5	4	4	1	3	3	23
120	3	4	4	4	3	4	3	25
121	4	4	4	4	3	5	4	28
122	4	4	4	4	3	3	4	26
123	3	4	4	4	4	4	4	27
124	4	4	4	4	4	4	4	28
125	4	4	4	4	4	4	4	28
126	4	2	3	3	4	4	3	23
127	3	3	3	3	3	3	3	21
128	4	4	4	4	4	4	4	28
129	3	4	3	4	3	2	4	23
130	2	3	3	3	3	3	3	20
131	3	3	3	4	3	2	3	21
132	4	4	3	4	5	3	5	28
133	4	3	4	3	4	3	4	25
134	3	5	5	5	4	3	4	29
135	3	3	2	3	4	4	3	22
136	4	5	3	4	3	4	4	27
137	4	3	2	3	3	3	3	21
138	4	3	4	4	3	4	3	25
139	3	4	3	3	3	4	4	24
140	4	2	3	3	4	3	2	21
141	3	3	3	4	4	3	2	22
142	3	3	4	4	4	3	4	25
143	4	4	3	3	4	3	3	24
144	4	4	3	4	3	4	3	25
145	4	4	3	4	4	4	3	26
146	4	3	2	4	2	2	3	20

147	3	3	4	2	3	3	3	21
148	3	2	2	2	3	4	2	18
149	4	3	4	4	4	3	3	25
150	2	3	3	3	2	3	2	18

c. Service Quality (Taste and Materiality, and store atmosphere)

No.	Taste (T)				Total T	Materiality (M)				Total M	Store Atmosphere (SA)				Total SA
	T1	T5	T3	T4		M1	M5	M3	M4		SA1	SA5	SA3	SA4	
1	4	4	4	4	16	4	5	5	5	19	5	4	4	4	17
2	3	3	3	3	12	4	4	4	3	15	3	4	4	3	14
3	4	4	4	4	16	4	3	3	4	14	3	4	3	3	13
4	3	3	3	3	12	4	4	4	4	16	4	4	4	4	16
5	3	3	3	4	13	4	5	5	4	18	3	4	4	4	15
6	4	4	4	4	16	4	4	4	4	16	4	4	3	4	15
7	4	4	4	4	16	4	4	3	4	15	4	4	3	3	14
8	4	4	4	4	16	4	4	3	4	15	4	3	4	4	15
9	5	5	4	4	18	4	4	4	5	17	5	5	5	5	20
10	4	4	4	4	16	4	4	4	4	16	4	3	4	3	14
11	4	4	4	4	16	4	4	4	4	16	4	4	3	4	15
12	4	4	3	3	14	4	4	4	4	16	4	4	3	4	15
13	3	3	3	3	12	4	4	4	4	16	4	4	4	4	16
14	4	2	3	3	12	4	4	4	4	16	4	4	2	4	14
15	4	3	3	4	14	4	4	4	4	16	4	4	3	3	14
16	3	3	3	3	12	4	5	4	4	17	4	4	3	4	15
17	4	4	4	3	15	3	4	4	4	15	4	2	2	2	10
18	4	4	4	4	16	4	5	4	5	18	3	4	5	3	15
19	4	4	4	4	16	4	5	4	5	18	4	5	4	4	17
20	4	4	3	4	15	4	4	4	4	16	4	4	3	3	14

21	4	4	4	4	16	4	4	4	4	16	3	4	3	2	12
22	4	4	4	3	15	4	5	5	5	19	2	2	3	3	10
23	4	4	4	4	16	3	4	3	2	12	4	4	4	4	16
24	4	4	4	4	16	4	4	4	4	16	4	4	4	4	16
25	3	3	3	4	13	3	4	4	4	15	4	4	4	3	15
26	4	3	3	3	13	3	4	3	4	14	3	4	3	4	14
27	3	3	2	3	11	2	5	5	5	17	4	4	3	2	13
28	4	3	2	4	13	4	4	4	4	16	4	4	2	4	14
29	4	4	3	3	14	4	4	4	4	16	4	4	4	4	16
30	2	2	2	2	8	4	4	4	4	16	3	4	3	4	14
31	5	5	5	5	20	5	4	4	5	18	5	4	4	4	17
32	4	4	4	4	16	4	4	4	4	16	4	4	3	4	15
33	4	4	4	4	16	5	5	4	5	19	5	4	3	3	15
34	4	4	4	4	16	5	4	5	5	19	5	5	5	5	20
35	5	4	5	5	19	3	4	5	3	15	4	4	4	4	16
36	4	4	4	4	16	4	4	4	4	16	4	3	3	1	11
37	3	3	3	3	12	3	5	4	4	16	3	4	3	3	13
38	5	5	5	5	20	5	4	5	4	18	5	5	4	5	19
39	3	3	3	3	12	4	5	3	5	17	4	4	3	3	14
40	3	3	3	3	12	4	4	4	4	16	3	4	2	4	13
41	3	3	3	3	12	3	3	3	3	12	3	3	3	3	12
42	3	3	3	3	12	4	4	4	4	16	4	4	3	4	15
43	4	3	3	4	14	4	4	3	4	15	4	4	3	2	13
44	4	4	4	4	16	4	4	4	4	16	4	4	4	4	16
45	4	4	4	4	16	4	4	4	4	16	4	4	3	3	14
46	4	4	4	3	15	4	4	4	4	16	5	5	2	3	15
47	4	4	4	4	16	4	4	4	4	16	3	4	4	3	14
58	5	5	5	5	20	4	5	4	3	16	3	4	4	5	16
49	5	5	4	4	18	4	4	4	5	17	5	5	5	5	20
50	4	3	5	4	16	4	5	4	5	18	5	2	3	4	14
51	4	4	4	4	16	5	4	4	4	17	5	4	4	4	17
52	3	3	3	3	12	3	4	4	3	14	3	4	4	3	14
53	4	4	4	4	16	3	4	3	3	13	3	4	3	3	13
54	3	3	3	3	12	4	4	4	4	16	4	4	4	4	16
55	3	3	3	4	13	3	4	4	4	15	3	4	4	4	15
56	4	4	4	4	16	4	4	3	4	15	4	4	3	4	15
57	4	4	4	4	16	4	4	3	3	14	4	4	3	3	14
58	4	4	4	4	16	4	3	4	4	15	4	3	4	4	15
59	5	5	4	4	18	5	5	5	5	20	5	5	5	5	20
60	4	4	4	4	16	4	3	4	3	14	4	3	4	3	14
61	4	4	4	4	16	4	4	3	4	15	4	4	3	4	15
62	4	4	3	3	14	4	4	4	4	16	4	4	3	4	15

63	3	3	3	3	12	4	4	4	4	16	4	4	4	4	16
64	4	5	3	3	15	4	4	4	4	16	4	4	5	4	17
65	4	3	3	4	14	4	4	4	4	16	4	4	3	3	14
66	3	3	3	3	12	4	5	4	4	17	4	4	3	4	15
67	4	4	4	3	15	3	4	4	4	15	4	5	5	5	19
68	4	4	4	4	16	4	5	4	5	18	3	4	5	3	15
69	4	4	4	4	16	4	5	4	5	18	4	5	4	4	17
70	4	4	3	4	15	4	4	4	4	16	4	4	3	3	14
71	4	4	4	4	16	4	4	4	4	16	3	4	3	5	15
72	4	4	4	3	15	4	3	5	5	17	5	5	4	5	19
73	4	4	4	4	16	3	4	3	5	15	4	4	4	4	16
74	4	4	3	3	14	4	4	4	4	16	4	4	4	4	16
75	2	2	2	2	8	4	4	4	4	16	3	4	3	4	14
76	5	5	5	5	20	5	5	5	5	20	5	4	4	4	17
77	4	4	4	4	16	4	4	4	4	16	4	4	3	4	15
78	4	4	4	4	16	5	5	4	5	19	5	4	3	3	15
79	4	4	4	4	16	5	4	5	5	19	5	5	5	5	20
80	4	3	3	4	14	5	4	5	5	19	3	4	5	3	15
81	4	4	4	4	16	4	3	3	1	11	4	4	2	4	14
82	3	3	3	3	12	3	5	4	4	16	3	4	3	3	13
83	5	5	5	5	20	5	5	5	5	20	5	5	4	5	19
84	3	3	3	3	12	5	5	5	5	20	4	4	3	3	14
85	3	3	3	3	12	4	4	4	4	16	3	4	2	4	13
86	3	3	3	3	12	4	4	4	4	16	4	4	3	4	15
87	4	3	3	4	14	4	4	3	4	15	4	4	3	2	13
88	4	4	4	4	16	4	4	4	4	16	4	4	4	4	16
89	4	4	4	4	16	4	4	4	4	16	4	4	3	3	14
90	4	4	4	3	15	4	4	4	4	16	5	5	2	3	15
91	4	4	4	4	16	4	4	4	4	16	3	4	4	3	14
92	5	5	5	5	20	4	5	5	5	19	3	4	4	5	16
93	3	3	3	3	12	3	3	3	3	12	3	3	3	3	12
94	3	3	3	3	12	4	4	4	4	16	3	3	4	3	13
95	4	3	2	3	12	4	3	4	4	15	4	3	3	4	14
96	4	3	3	2	12	4	3	4	3	14	4	2	4	3	13
97	4	4	4	3	15	4	3	2	3	12	4	3	2	2	11
98	3	3	2	2	10	3	3	3	3	12	4	2	2	3	11
99	4	4	5	5	18	5	5	5	5	20	5	3	2	4	14
100	4	4	4	4	16	4	5	5	5	19	5	4	4	4	17
101	4	3	3	3	13	3	4	3	4	14	3	4	3	4	14
102	3	3	2	3	11	2	5	5	5	17	4	4	3	2	13
103	4	3	2	4	13	4	4	4	4	16	4	4	2	4	14
104	5	1	2	5	13	5	4	4	5	18	4	3	5	3	15

105	3	3	3	4	13	3	4	4	4	15	3	3	3	4	13
106	3	3	4	3	13	4	4	4	4	16	3	3	3	2	11
107	3	3	3	4	13	4	4	4	4	16	4	4	3	4	15
108	4	4	4	4	16	3	5	4	4	16	3	4	3	4	14
109	5	5	5	5	20	5	5	5	5	20	4	5	4	3	16
110	4	4	3	3	14	4	5	4	3	16	4	4	3	4	15
111	3	3	4	4	14	3	4	4	4	15	3	4	3	4	14
112	4	3	4	4	15	4	4	4	4	16	3	4	4	4	15
113	5	4	4	4	17	5	5	5	4	19	4	4	3	3	14
114	5	3	3	3	14	4	4	4	4	16	4	4	3	3	14
115	4	3	3	4	14	4	5	5	5	19	5	5	4	4	18
116	2	2	2	2	8	4	4	4	4	16	3	2	2	2	9
117	4	4	4	4	16	5	5	4	4	18	4	5	4	3	16
118	3	3	3	3	12	3	5	4	3	15	3	4	3	3	13
119	3	3	4	3	13	5	4	4	4	17	4	4	3	3	14
120	3	4	3	2	12	4	4	4	5	17	4	4	4	4	16
121	4	4	3	4	15	4	4	4	4	16	4	2	3	4	13
122	4	3	3	4	14	4	4	4	4	16	4	3	3	3	13
123	4	3	4	4	15	4	4	2	4	14	3	2	3	3	11
124	5	3	4	4	16	2	2	3	5	12	4	4	3	3	14
125	3	3	3	3	12	2	4	4	4	14	4	4	3	3	14
126	4	3	4	4	15	4	3	4	4	15	4	3	3	3	13
127	3	3	3	3	12	3	3	3	3	12	2	3	3	3	11
128	4	4	4	4	16	4	4	4	4	16	4	4	4	4	16
129	3	3	3	3	12	4	4	4	4	16	3	4	3	4	14
130	2	2	2	2	8	3	3	3	3	12	3	3	3	3	12
131	4	3	2	2	11	4	3	4	4	15	3	3	4	5	15
132	4	4	4	5	17	5	5	4	4	18	2	3	4	4	13
133	4	4	4	3	15	4	5	5	5	19	4	4	4	4	16
134	2	2	2	2	8	3	3	5	5	16	3	4	3	5	15
135	3	4	3	3	13	3	4	3	3	13	4	4	3	2	13
136	3	4	2	3	12	3	3	2	3	11	3	4	4	3	14
137	4	3	4	3	14	4	3	3	3	13	4	3	4	3	14
138	4	2	3	3	12	4	3	2	2	11	4	3	3	3	13
139	3	3	3	3	12	4	3	3	4	14	3	4	4	2	13
140	4	3	4	2	13	4	3	3	3	13	4	3	3	4	14
141	4	3	3	4	14	4	3	4	3	14	4	3	2	3	12
142	4	3	3	3	13	3	2	3	4	12	4	3	2	3	12
143	4	4	3	3	14	4	3	2	3	12	4	3	4	4	15
144	4	4	3	3	14	4	3	3	3	13	4	3	3	3	13
145	3	4	4	3	14	4	4	4	3	15	4	4	3	4	15
146	3	3	3	3	12	4	4	4	4	16	3	3	4	3	13

147	4	3	2	3	12	4	3	4	4	15	4	3	3	4	14
148	4	3	3	2	12	4	3	4	3	14	4	2	4	3	13
149	4	4	4	3	15	4	3	2	3	12	4	3	2	2	11
150	3	3	2	2	10	3	3	3	3	12	4	2	2	3	11

d. Customer Satisfaction and Loyalty

No.	Customer Satisfaction (CS)				Total CS	Customer Loyalty (Y)				Total Y
	CS1	CS5	CS3	CS4		Y1	Y5	Y3	Y4	
1	4	4	4	4	16	3	4	3	3	13
2	3	3	4	3	13	3	3	3	3	12
3	3	4	3	3	13	3	3	3	3	12
4	4	4	4	4	16	3	4	3	3	13
5	4	4	4	4	16	3	4	4	4	15
6	4	5	4	4	17	3	4	3	3	13
7	4	4	3	3	14	2	3	2	2	9
8	4	4	4	4	16	4	4	2	2	12
9	4	5	5	5	19	4	4	4	4	16
10	4	4	4	4	16	4	4	4	4	16
11	4	4	4	4	16	4	4	4	4	16
12	4	4	4	4	16	4	4	4	4	16
13	4	4	4	4	16	4	4	4	4	16
14	4	4	4	4	16	4	4	3	3	14
15	4	4	4	4	16	3	4	3	3	13
16	4	3	4	4	15	4	3	4	4	15
17	4	3	4	4	15	3	3	2	2	10
18	5	5	4	5	19	3	4	3	3	13

19	4	4	5	4	17	5	5	3	4	17
20	4	4	4	4	16	4	4	4	4	16
21	4	5	4	5	18	4	4	3	4	15
22	4	4	4	4	16	3	3	1	1	8
23	4	4	4	4	16	4	4	3	2	13
24	4	4	4	4	16	3	4	4	4	15
25	3	3	4	2	12	3	4	3	3	13
26	4	4	4	4	16	3	3	3	3	12
27	4	3	4	2	13	3	3	2	2	10
28	4	3	4	4	15	2	3	2	3	10
29	4	3	4	4	15	3	4	3	3	13
30	4	2	4	3	13	2	3	2	2	9
31	5	5	5	5	20	4	5	4	4	17
32	4	4	4	4	16	3	4	3	3	13
33	4	4	5	3	16	3	3	3	2	11
34	5	5	5	5	20	3	4	3	3	13
35	4	4	4	4	16	3	3	2	1	9
36	4	4	2	4	14	3	4	1	1	9
37	3	3	3	4	13	3	4	3	3	13
38	5	5	5	5	20	1	5	5	5	16
39	4	4	4	4	16	2	3	3	3	11
40	4	4	4	3	15	3	3	2	2	10
41	3	3	3	3	12	4	4	4	4	16
42	4	4	4	4	16	3	4	3	2	12
43	3	4	4	3	14	3	4	4	4	15
44	4	4	4	4	16	4	4	4	4	16
45	4	3	4	4	15	3	4	3	3	13
46	4	3	3	3	13	3	3	3	2	11
47	4	4	5	4	17	3	4	3	4	14
58	4	4	5	5	18	3	3	1	2	9
49	4	5	5	5	19	4	4	4	4	16
50	2	5	4	3	14	3	4	4	3	14
51	4	4	4	4	16	3	4	3	3	13
52	3	3	4	3	13	3	3	3	3	12
53	3	4	3	3	13	3	3	3	3	12
54	4	4	4	4	16	3	4	3	3	13
55	4	4	4	4	16	3	4	4	4	15
56	4	5	4	4	17	3	4	3	3	13
57	4	4	3	3	14	5	3	5	5	18
58	4	4	4	4	16	4	4	5	5	18
59	4	5	5	5	19	4	4	4	4	16
60	4	4	4	4	16	4	4	4	4	16

61	4	4	4	4	16	4	4	4	4	16
62	4	4	4	4	16	4	4	4	4	16
63	4	4	4	4	16	4	4	4	4	16
64	4	4	4	4	16	4	4	3	3	14
65	4	4	4	4	16	3	4	3	3	13
66	4	3	4	4	15	4	3	4	4	15
67	4	3	4	4	15	3	3	5	5	16
68	5	5	4	5	19	3	4	3	3	13
69	4	4	5	4	17	5	5	3	4	17
70	4	4	4	4	16	4	4	4	4	16
71	4	5	4	5	18	4	4	3	4	15
72	4	4	4	4	16	5	5	4	4	18
73	4	4	4	4	16	4	4	3	5	16
74	4	3	4	4	15	3	4	3	3	13
75	4	2	4	3	13	2	3	2	2	9
76	5	5	5	5	20	4	5	4	4	17
77	4	4	4	4	16	3	4	3	3	13
78	4	4	5	3	16	3	3	3	2	11
79	5	5	5	5	20	3	4	3	3	13
80	4	4	4	4	16	3	3	2	1	9
81	3	4	1	1	9	4	5	4	4	17
82	3	3	3	4	13	3	4	3	3	13
83	5	5	5	5	20	1	5	5	5	16
84	4	4	4	4	16	2	3	3	3	11
85	4	4	4	3	15	3	3	2	2	10
86	4	4	4	4	16	3	4	3	2	12
87	3	4	4	3	14	3	4	4	4	15
88	4	4	4	4	16	4	4	4	4	16
89	4	3	4	4	15	3	4	3	3	13
90	4	3	3	3	13	3	3	3	2	11
91	4	4	5	4	17	3	4	3	4	14
92	4	4	5	5	18	3	3	1	2	9
93	3	3	3	3	12	4	4	4	4	16
94	3	2	4	3	12	2	4	2	3	11
95	2	3	3	4	12	2	3	2	2	9
96	3	4	2	3	12	4	4	3	3	14
97	4	3	4	2	13	4	3	3	2	12
98	3	3	3	3	12	2	2	2	2	8
99	4	4	5	3	16	4	4	3	3	14
100	4	4	4	4	16	3	4	3	3	13
101	4	4	4	4	16	3	3	3	3	12
102	4	3	4	2	13	3	3	2	2	10

103	4	3	4	4	15	2	3	2	3	10
104	5	4	3	5	17	1	1	1	2	5
105	3	3	4	4	14	2	3	2	2	9
106	4	4	4	4	16	4	4	2	2	12
107	4	3	4	4	15	3	4	3	3	13
108	4	4	4	4	16	4	4	4	4	16
109	5	5	5	4	19	4	4	5	4	17
110	4	4	4	4	16	3	3	3	2	11
111	4	3	4	4	15	3	4	4	3	14
112	4	4	4	3	15	3	4	3	3	13
113	4	4	4	4	16	4	4	2	2	12
114	4	4	4	4	16	3	4	3	3	13
115	4	4	4	4	16	3	3	3	3	12
116	4	3	4	3	14	2	3	3	3	11
117	4	4	4	4	16	4	4	4	3	15
118	3	3	3	3	12	2	3	3	2	10
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121	4	4	4	4	16	2	2	4	3	11
122	4	4	4	4	16	3	3	2	2	10
123	4	4	4	4	16	2	3	2	2	9
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127	3	3	3	3	12	2	3	2	2	9
128	4	4	4	4	16	4	4	4	4	16
129	4	4	4	4	16	3	4	3	3	13
130	2	2	2	2	8	2	2	2	2	8
131	4	4	3	2	13	4	5	3	3	15
132	4	3	3	2	12	5	4	3	2	14
133	3	3	4	4	14	4	4	3	2	13
134	3	2	4	3	12	3	3	3	3	12
135	3	4	3	3	13	4	2	3	3	12
136	3	4	2	2	11	4	3	3	2	12
137	4	4	2	2	12	4	3	3	4	14
138	3	3	3	2	11	4	3	3	3	13
139	3	4	3	4	14	4	2	3	3	12
140	4	4	4	3	15	3	2	3	4	12
141	3	4	3	2	12	4	3	3	4	14
142	3	4	4	4	15	4	4	3	3	14
143	4	4	3	4	15	4	4	3	3	14
144	3	3	3	3	12	4	3	4	4	15

145	4	4	3	3	14	4	3	3	3	13
146	3	2	4	3	12	2	4	2	3	11
147	2	3	3	4	12	2	3	2	2	9
148	3	4	2	3	12	4	4	3	3	14
149	4	3	4	2	13	4	3	3	2	12
150	3	3	3	3	12	2	2	2	2	8

RELIABILITY AND VALIDITY TEST

Trust and Reactivity

Reliability Test

Reliability Statistics

Cronbach's Alpha	N of Items
.767	9

Validity Test

Correlations

		TR1	TR2	TR3	TR4	TR5	TR6	TR7	TR8	totalTR
TR1	Pearson Correlation	1	.250	.488**	.652**	.316	.547**	.306	.270	.688**
	Sig. (2-tailed)		.182	.006	.000	.089	.002	.100	.150	.000
	N	30	30	30	30	30	30	30	30	30
TR2	Pearson Correlation	.250	1	.324	.419*	.554**	.358	.316	.366*	.662**
	Sig. (2-tailed)	.182		.081	.021	.001	.052	.089	.047	.000
	N	30	30	30	30	30	30	30	30	30
TR3	Pearson Correlation	.488**	.324	1	.564**	.419*	.565**	.506**	.343	.686**
	Sig. (2-tailed)	.006	.081		.001	.021	.001	.004	.063	.000
	N	30	30	30	30	30	30	30	30	30
TR4	Pearson Correlation	.652**	.419*	.564**	1	.555**	.510**	.396*	.259	.720**
	Sig. (2-tailed)	.000	.021	.001		.001	.004	.030	.167	.000
	N	30	30	30	30	30	30	30	30	30
TR5	Pearson Correlation	.316	.554**	.419*	.555**	1	.537**	.680**	.312	.767**
	Sig. (2-tailed)	.089	.001	.021	.001		.002	.000	.094	.000
	N	30	30	30	30	30	30	30	30	30
TR6	Pearson Correlation	.547**	.358	.565**	.510**	.537**	1	.562**	.328	.804**
	Sig. (2-tailed)	.002	.052	.001	.004	.002		.001	.077	.000
	N	30	30	30	30	30	30	30	30	30
TR7	Pearson Correlation	.306	.316	.506**	.396*	.680**	.562**	1	.130	.673**
	Sig. (2-tailed)	.100	.089	.004	.030	.000	.001		.495	.000
	N	30	30	30	30	30	30	30	30	30
TR8	Pearson Correlation	.270	.366*	.343	.259	.312	.328	.130	1	.563**
	Sig. (2-tailed)	.150	.047	.063	.167	.094	.077	.495		.001
	N	30	30	30	30	30	30	30	30	30
totalTR	Pearson Correlation	.688**	.662**	.686**	.720**	.767**	.804**	.673**	.563**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.001	
	N	30	30	30	30	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Assurance and Sympathy

Reliability Test

Reliability Statistics

Cronbach's Alpha	N of Items
.737	8

Validity Test

Correlations

		AS1	AS2	AS3	AS4	AS5	AS6	AS7	AS8	totalAS
AS1	Pearson Correlation	1	.277	.539**	.357	.351	.320	-.032	.180	.632**
	Sig. (2-tailed)		.138	.002	.053	.058	.084	.868	.342	.000
	N	30	30	30	30	30	30	30	30	30
AS2	Pearson Correlation	.277	1	.528**	.639**	-.022	.194	.233	-.011	.617**
	Sig. (2-tailed)	.138		.003	.000	.909	.304	.215	.953	.000
	N	30	30	30	30	30	30	30	30	30
AS3	Pearson Correlation	.539**	.528**	1	.631**	.445*	.152	-.028	.055	.727**
	Sig. (2-tailed)	.002	.003		.000	.014	.423	.883	.772	.000
	N	30	30	30	30	30	30	30	30	30
AS4	Pearson Correlation	.357	.639**	.631**	1	.122	.079	-.095	.187	.653**
	Sig. (2-tailed)	.053	.000	.000		.521	.677	.616	.321	.000
	N	30	30	30	30	30	30	30	30	30
AS5	Pearson Correlation	.351	-.022	.445*	.122	1	.460*	.228	.139	.601**
	Sig. (2-tailed)	.058	.909	.014	.521		.010	.226	.465	.000
	N	30	30	30	30	30	30	30	30	30
AS6	Pearson Correlation	.320	.194	.152	.079	.460*	1	.409*	.340	.630**
	Sig. (2-tailed)	.084	.304	.423	.677	.010		.025	.066	.000
	N	30	30	30	30	30	30	30	30	30
AS7	Pearson Correlation	-.032	.233	-.028	-.095	.228	.409*	1	-.133	.300
	Sig. (2-tailed)	.868	.215	.883	.616	.226	.025		.482	.107
	N	30	30	30	30	30	30	30	30	30
AS8	Pearson Correlation	.180	-.011	.055	.187	.139	.340	-.133	1	.419*
	Sig. (2-tailed)	.342	.953	.772	.321	.465	.066	.482		.021
	N	30	30	30	30	30	30	30	30	30
totalAS	Pearson Correlation	.632**	.617**	.727**	.653**	.601**	.630**	.300	.419*	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.107	.021	
	N	30	30	30	30	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

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Taste

Reliability Test

Reliability Statistics

Cronbach's Alpha	N of Items
.844	5

Validity Test

Correlations

		T1	T2	T3	T4	totalT
T1	Pearson Correlation	1	.869**	.783**	.826**	.943**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	30	30	30	30	30
T2	Pearson Correlation	.869**	1	.780**	.721**	.916**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	30	30	30	30	30
T3	Pearson Correlation	.783**	.780**	1	.756**	.914**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	30	30	30	30	30
T4	Pearson Correlation	.826**	.721**	.756**	1	.896**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	30	30	30	30	30
totalT	Pearson Correlation	.943**	.916**	.914**	.896**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

Materiality

Reliability Test

Reliability Statistics

Cronbach's Alpha	N of Items
.812	5

Validity Test

Correlations

		M1	M2	M3	M4	totalM
M1	Pearson Correlation	1	.260	.339	.515**	.698**
	Sig. (2-tailed)		.165	.067	.004	.000
	N	30	30	30	30	30
M2	Pearson Correlation	.260	1	.625**	.686**	.776**
	Sig. (2-tailed)	.165		.000	.000	.000
	N	30	30	30	30	30
M3	Pearson Correlation	.339	.625**	1	.629**	.804**
	Sig. (2-tailed)	.067	.000		.000	.000
	N	30	30	30	30	30
M4	Pearson Correlation	.515**	.686**	.629**	1	.896**
	Sig. (2-tailed)	.004	.000	.000		.000
	N	30	30	30	30	30
totalM	Pearson Correlation	.698**	.776**	.804**	.896**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

Store Atmosphere

Reliability Test

Reliability Statistics

Cronbach's Alpha	N of Items
.778	5

Validity Test

Correlations

		SA1	SA2	SA3	SA4	totalSA
SA1	Pearson Correlation	1	.356	.145	.357	.630**
	Sig. (2-tailed)		.053	.445	.053	.000
	N	30	30	30	30	30
SA2	Pearson Correlation	.356	1	.335	.461*	.746**
	Sig. (2-tailed)	.053		.070	.010	.000
	N	30	30	30	30	30
SA3	Pearson Correlation	.145	.335	1	.309	.671**
	Sig. (2-tailed)	.445	.070		.096	.000
	N	30	30	30	30	30
SA4	Pearson Correlation	.357	.461*	.309	1	.764**
	Sig. (2-tailed)	.053	.010	.096		.000
	N	30	30	30	30	30
totalSA	Pearson Correlation	.630**	.746**	.671**	.764**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Customer Satisfaction

Reliability Test

Reliability Statistics

Cronbach's Alpha	N of Items
.805	5

Validity Test

Correlations

		CS1	CS2	CS3	CS4	totalCS
CS1	Pearson Correlation	1	.263	.427*	.579**	.707**
	Sig. (2-tailed)		.160	.019	.001	.000
	N	30	30	30	30	30
CS2	Pearson Correlation	.263	1	.467**	.604**	.784**
	Sig. (2-tailed)	.160		.009	.000	.000
	N	30	30	30	30	30
CS3	Pearson Correlation	.427*	.467**	1	.379*	.724**
	Sig. (2-tailed)	.019	.009		.039	.000
	N	30	30	30	30	30
CS4	Pearson Correlation	.579**	.604**	.379*	1	.852**
	Sig. (2-tailed)	.001	.000	.039		.000
	N	30	30	30	30	30
totalCS	Pearson Correlation	.707**	.784**	.724**	.852**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	30	30	30	30	30

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Customer Loyalty

Reliability Test

Reliability Statistics

Cronbach's Alpha	N of Items
.825	5

Validity Test

Correlations

		CL1	CL2	CL3	CL4	totalCL
CL1	Pearson Correlation	1	.634**	.520**	.517**	.778**
	Sig. (2-tailed)		.000	.003	.003	.000
	N	30	30	30	30	30
CL2	Pearson Correlation	.634**	1	.502**	.526**	.750**
	Sig. (2-tailed)	.000		.005	.003	.000
	N	30	30	30	30	30
CL3	Pearson Correlation	.520**	.502**	1	.903**	.902**
	Sig. (2-tailed)	.003	.005		.000	.000
	N	30	30	30	30	30
CL4	Pearson Correlation	.517**	.526**	.903**	1	.908**
	Sig. (2-tailed)	.003	.003	.000		.000
	N	30	30	30	30	30
totalCL	Pearson Correlation	.778**	.750**	.902**	.908**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

APPENDIX 5

ANALYSIS RESULT

1. Service quality (trust and reactivity, assurance and sympathy, taste, materiality, and store atmosphere) on customer satisfaction

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	SA, AS, Materiality, Taste, TR[a]	.	Enter

a. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.820[a]	.673	.662	1.281

a. Predictors: (Constant), SA, AS, Materiality, Taste, TR

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	487.025	5	97.405	59.314	.000[a]
	Residual	236.475	144	1.642		
	Total	723.500	149			

a. Predictors: (Constant), SA, AS, Materiality, Taste, TR

b. Dependent Variable: CS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.559	1.018		-1.532	.128

TR	.148	.041	.257	3.625	.000
AS	.046	.044	.070	1.032	.304
Taste	.241	.055	.272	4.417	.000
Materiality	.330	.062	.310	5.368	.000
SA	.161	.067	.149	2.397	.018

a. Dependent Variable: CS

2. Service quality (trust and reactivity, assurance and sympathy, taste, materiality, and store atmosphere) on customer loyalty

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	SA, AS, Materiality, Taste, TR[a]	.	Enter

a. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.548[a]	.300	.276	2.178

a. Predictors: (Constant), SA, AS, Materiality, Taste, TR

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	292.724	5	58.545	12.340	.000[a]
	Residual	683.169	144	4.744		
	Total	975.893	149			

a. Predictors: (Constant), SA, AS, Materiality, Taste, TR

b. Dependent Variable: CL

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.532	1.730		3.777	.000
	TR	-.156	.069	-.233	-2.245	.026
	AS	.098	.075	.130	1.303	.195
	Taste	.308	.093	.299	3.322	.001
	Materiality	-.273	.105	-.220	-2.613	.010
	SA	.594	.114	.472	5.203	.000

a. Dependent Variable: CL

3. Customer loyalty on customer satisfaction

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	CS[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: CL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.310[a]	.096	.090	2.441

a. Predictors: (Constant), CS

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93.866	1	93.866	15.750	.000[a]
	Residual	882.027	148	5.960		
	Total	975.893	149			

a. Predictors: (Constant), CS

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93.866	1	93.866	15.750	.000[a]
	Residual	882.027	148	5.960		
	Total	975.893	149			

a. Predictors: (Constant), CS

b. Dependent Variable: CL

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.588	1.385		5.479	.000
	CS	.360	.091	.310	3.969	.000

a. Dependent Variable: CL

APPENDIX 6

R-TABLE FOR VALIDITY

df = (N-2)	One Tail Significance Level				
	0.05	0.025	0.01	0.005	0.0005

	Two Tail Significance Level				
	0.1	**0.05**	**0.02**	**0.01**	**0.001**
1	0.9877	0.9969	0.9995	0.9999	1.0000
2	0.9000	0.9500	0.9800	0.9900	0.9990
3	0.8054	0.8783	0.9343	0.9587	0.9911
4	0.7293	0.8114	0.8822	0.9172	0.9741
5	0.6694	0.7545	0.8329	0.8745	0.9509
6	0.6215	0.7067	0.7887	0.8343	0.9249
7	0.5822	0.6664	0.7498	0.7977	0.8983
8	0.5494	0.6319	0.7155	0.7646	0.8721
9	0.5214	0.6021	0.6851	0.7348	0.8470
10	0.4973	0.5760	0.6581	0.7079	0.8233
11	0.4762	0.5529	0.6339	0.6835	0.8010
12	0.4575	0.5324	0.6120	0.6614	0.7800
13	0.4409	0.5140	0.5923	0.6411	0.7604
14	0.4259	0.4973	0.5742	0.6226	0.7419
15	0.4124	0.4821	0.5577	0.6055	0.7247
16	0.4000	0.4683	0.5425	0.5897	0.7084
17	0.3887	0.4555	0.5285	0.5751	0.6932
18	0.3783	0.4438	0.5155	0.5614	0.6788
19	0.3687	0.4329	0.5034	0.5487	0.6652
20	0.3598	0.4227	0.4921	0.5368	0.6524
21	0.3515	0.4132	0.4815	0.5256	0.6402
22	0.3438	0.4044	0.4716	0.5151	0.6287
23	0.3365	0.3961	0.4622	0.5052	0.6178
24	0.3297	0.3882	0.4534	0.4958	0.6074
25	0.3233	0.3809	0.4451	0.4869	0.5974
26	0.3172	0.3739	0.4372	0.4785	0.5880

27	0.3115	0.3673	0.4297	0.4705	0.5790
28	0.3061	0.3610	0.4226	0.4629	0.5703
29	0.3009	0.3550	0.4158	0.4556	0.5620
30	0.2960	0.3494	0.4093	0.4487	0.5541
31	0.2913	0.3440	0.4032	0.4421	0.5465
32	0.2869	0.3388	0.3972	0.4357	0.5392
33	0.2826	0.3338	0.3916	0.4296	0.5322
34	0.2785	0.3291	0.3862	0.4238	0.5254
35	0.2746	0.3246	0.3810	0.4182	0.5189
36	0.2709	0.3202	0.3760	0.4128	0.5126
37	0.2673	0.3160	0.3712	0.4076	0.5066
38	0.2638	0.3120	0.3665	0.4026	0.5007
39	0.2605	0.3081	0.3621	0.3978	0.4950
40	0.2573	0.3044	0.3578	0.3932	0.4896
41	0.2542	0.3008	0.3536	0.3887	0.4843
42	0.2512	0.2973	0.3496	0.3843	0.4791
43	0.2483	0.2940	0.3457	0.3801	0.4742
44	0.2455	0.2907	0.3420	0.3761	0.4694
45	0.2429	0.2876	0.3384	0.3721	0.4647
46	0.2403	0.2845	0.3348	0.3683	0.4601
47	0.2377	0.2816	0.3314	0.3646	0.4557
48	0.2353	0.2787	0.3281	0.3610	0.4514
49	0.2329	0.2759	0.3249	0.3575	0.4473
50	0.2306	0.2732	0.3218	0.3542	0.4432
51	0.2284	0.2706	0.3188	0.3509	0.4393
52	0.2262	0.2681	0.3158	0.3477	0.4354
53	0.2241	0.2656	0.3129	0.3445	0.4317
54	0.2221	0.2632	0.3102	0.3415	0.4280
55	0.2201	0.2609	0.3074	0.3385	0.4244

56	0.2181	0.2586	0.3048	0.3357	0.4210
57	0.2162	0.2564	0.3022	0.3328	0.4176
58	0.2144	0.2542	0.2997	0.3301	0.4143
59	0.2126	0.2521	0.2972	0.3274	0.4110
60	0.2108	0.2500	0.2948	0.3248	0.4079
61	0.2091	0.2480	0.2925	0.3223	0.4048
62	0.2075	0.2461	0.2902	0.3198	0.4018
63	0.2058	0.2441	0.2880	0.3173	0.3988
64	0.2042	0.2423	0.2858	0.3150	0.3959
65	0.2027	0.2404	0.2837	0.3126	0.3931
66	0.2012	0.2387	0.2816	0.3104	0.3903
67	0.1997	0.2369	0.2796	0.3081	0.3876
68	0.1982	0.2352	0.2776	0.3060	0.3850
69	0.1968	0.2335	0.2756	0.3038	0.3823
70	0.1954	0.2319	0.2737	0.3017	0.3798
71	0.1940	0.2303	0.2718	0.2997	0.3773
72	0.1927	0.2287	0.2700	0.2977	0.3748
73	0.1914	0.2272	0.2682	0.2957	0.3724
74	0.1901	0.2257	0.2664	0.2938	0.3701
75	0.1888	0.2242	0.2647	0.2919	0.3678
76	0.1876	0.2227	0.2630	0.2900	0.3655
77	0.1864	0.2213	0.2613	0.2882	0.3633
78	0.1852	0.2199	0.2597	0.2864	0.3611
79	0.1841	0.2185	0.2581	0.2847	0.3589
80	0.1829	0.2172	0.2565	0.2830	0.3568
81	0.1818	0.2159	0.2550	0.2813	0.3547
82	0.1807	0.2146	0.2535	0.2796	0.3527
83	0.1796	0.2133	0.2520	0.2780	0.3507
84	0.1786	0.2120	0.2505	0.2764	0.3487

85	0.1775	0.2108	0.2491	0.2748	0.3468
86	0.1765	0.2096	0.2477	0.2732	0.3449
87	0.1755	0.2084	0.2463	0.2717	0.3430
88	0.1745	0.2072	0.2449	0.2702	0.3412
89	0.1735	0.2061	0.2435	0.2687	0.3393
90	0.1726	0.2050	0.2422	0.2673	0.3375
91	0.1716	0.2039	0.2409	0.2659	0.3358
92	0.1707	0.2028	0.2396	0.2645	0.3341
93	0.1698	0.2017	0.2384	0.2631	0.3323
94	0.1689	0.2006	0.2371	0.2617	0.3307
95	0.1680	0.1996	0.2359	0.2604	0.3290
96	0.1671	0.1986	0.2347	0.2591	0.3274
97	0.1663	0.1975	0.2335	0.2578	0.3258
98	0.1654	0.1966	0.2324	0.2565	0.3242
99	0.1646	0.1956	0.2312	0.2552	0.3226
100	0.1638	0.1946	0.2301	0.2540	0.3211
101	0.1630	0.1937	0.2290	0.2528	0.3196
102	0.1622	0.1927	0.2279	0.2515	0.3181
103	0.1614	0.1918	0.2268	0.2504	0.3166
104	0.1606	0.1909	0.2257	0.2492	0.3152
105	0.1599	0.1900	0.2247	0.2480	0.3137
106	0.1591	0.1891	0.2236	0.2469	0.3123
107	0.1584	0.1882	0.2226	0.2458	0.3109
108	0.1576	0.1874	0.2216	0.2446	0.3095
109	0.1569	0.1865	0.2206	0.2436	0.3082
110	0.1562	0.1857	0.2196	0.2425	0.3068
111	0.1555	0.1848	0.2186	0.2414	0.3055
112	0.1548	0.1840	0.2177	0.2403	0.3042
113	0.1541	0.1832	0.2167	0.2393	0.3029

114	0.1535	0.1824	0.2158	0.2383	0.3016
115	0.1528	0.1816	0.2149	0.2373	0.3004
116	0.1522	0.1809	0.2139	0.2363	0.2991
117	0.1515	0.1801	0.2131	0.2353	0.2979
118	0.1509	0.1793	0.2122	0.2343	0.2967
119	0.1502	0.1786	0.2113	0.2333	0.2955
120	0.1496	0.1779	0.2104	0.2324	0.2943
121	0.1490	0.1771	0.2096	0.2315	0.2931
122	0.1484	0.1764	0.2087	0.2305	0.2920
123	0.1478	0.1757	0.2079	0.2296	0.2908
124	0.1472	0.1750	0.2071	0.2287	0.2897
125	0.1466	0.1743	0.2062	0.2278	0.2886
126	0.1460	0.1736	0.2054	0.2269	0.2875
127	0.1455	0.1729	0.2046	0.2260	0.2864
128	0.1449	0.1723	0.2039	0.2252	0.2853
129	0.1443	0.1716	0.2031	0.2243	0.2843
130	0.1438	0.1710	0.2023	0.2235	0.2832
131	0.1432	0.1703	0.2015	0.2226	0.2822
132	0.1427	0.1697	0.2008	0.2218	0.2811
133	0.1422	0.1690	0.2001	0.2210	0.2801
134	0.1416	0.1684	0.1993	0.2202	0.2791
135	0.1411	0.1678	0.1986	0.2194	0.2781
136	0.1406	0.1672	0.1979	0.2186	0.2771
137	0.1401	0.1666	0.1972	0.2178	0.2761
138	0.1396	0.1660	0.1965	0.2170	0.2752
139	0.1391	0.1654	0.1958	0.2163	0.2742
140	0.1386	0.1648	0.1951	0.2155	0.2733
141	0.1381	0.1642	0.1944	0.2148	0.2723
142	0.1376	0.1637	0.1937	0.2140	0.2714

143	0.1371	0.1631	0.1930	0.2133	0.2705
144	0.1367	0.1625	0.1924	0.2126	0.2696
145	0.1362	0.1620	0.1917	0.2118	0.2687
146	0.1357	0.1614	0.1911	0.2111	0.2678
147	0.1353	0.1609	0.1904	0.2104	0.2669
148	0.1348	0.1603	0.1898	0.2097	0.2660
149	0.1344	0.1598	0.1892	0.2090	0.2652
150	0.1339	0.1593	0.1886	0.2083	0.2643

APPENDIX 7

T-TABLE FOR T-TEST

α (1 tail)	0.05	0.025	0.01	0.005	0.0025	0.001	0.0005
α (2 tail)	0.1	0.05	0.02	0.01	0.005	0.002	0.001
df							
1	6.3138	12.7065	31.8193	63.6551	127.3447	318.493	636.045

2	2.92	4.3026	6.9646	9.9247	14.0887	22.3276	31.5989
3	2.3534	3.1824	4.5407	5.8408	7.4534	10.2145	12.9242
4	2.1319	2.7764	3.747	4.6041	5.5976	7.1732	8.6103
5	2.015	2.5706	3.365	4.0322	4.7734	5.8934	6.8688
6	1.9432	2.4469	3.1426	3.7074	4.3168	5.2076	5.9589
7	1.8946	2.3646	2.998	3.4995	4.0294	4.7852	5.4079
8	1.8595	2.306	2.8965	3.3554	3.8325	4.5008	5.0414
9	1.8331	2.2621	2.8214	3.2498	3.6896	4.2969	4.7809
10	1.8124	2.2282	2.7638	3.1693	3.5814	4.1437	4.5869
11	1.7959	2.201	2.7181	3.1058	3.4966	4.0247	4.4369
12	1.7823	2.1788	2.681	3.0545	3.4284	3.9296	4.3178
13	1.7709	2.1604	2.6503	3.0123	3.3725	3.852	4.2208
14	1.7613	2.1448	2.6245	2.9768	3.3257	3.7874	4.1404
15	1.753	2.1314	2.6025	2.9467	3.286	3.7328	4.0728
16	1.7459	2.1199	2.5835	2.9208	3.252	3.6861	4.015
17	1.7396	2.1098	2.5669	2.8983	3.2224	3.6458	3.9651
18	1.7341	2.1009	2.5524	2.8784	3.1966	3.6105	3.9216
19	1.7291	2.093	2.5395	2.8609	3.1737	3.5794	3.8834
20	1.7247	2.086	2.528	2.8454	3.1534	3.5518	3.8495
21	1.7207	2.0796	2.5176	2.8314	3.1352	3.5272	3.8193
22	1.7172	2.0739	2.5083	2.8188	3.1188	3.505	3.7921
23	1.7139	2.0686	2.4998	2.8073	3.104	3.485	3.7676
24	1.7109	2.0639	2.4922	2.797	3.0905	3.4668	3.7454
25	1.7081	2.0596	2.4851	2.7874	3.0782	3.4502	3.7251
26	1.7056	2.0555	2.4786	2.7787	3.0669	3.435	3.7067
27	1.7033	2.0518	2.4727	2.7707	3.0565	3.4211	3.6896
28	1.7011	2.0484	2.4671	2.7633	3.0469	3.4082	3.6739
29	1.6991	2.0452	2.462	2.7564	3.038	3.3962	3.6594
30	1.6973	2.0423	2.4572	2.75	3.0298	3.3852	3.6459
31	1.6955	2.0395	2.4528	2.744	3.0221	3.3749	3.6334
32	1.6939	2.0369	2.4487	2.7385	3.015	3.3653	3.6218
33	1.6924	2.0345	2.4448	2.7333	3.0082	3.3563	3.6109
34	1.6909	2.0322	2.4411	2.7284	3.0019	3.3479	3.6008
35	1.6896	2.0301	2.4377	2.7238	2.9961	3.34	3.5912
36	1.6883	2.0281	2.4345	2.7195	2.9905	3.3326	3.5822
37	1.6871	2.0262	2.4315	2.7154	2.9853	3.3256	3.5737
38	1.6859	2.0244	2.4286	2.7115	2.9803	3.319	3.5657
39	1.6849	2.0227	2.4258	2.7079	2.9756	3.3128	3.5581
40	1.6839	2.0211	2.4233	2.7045	2.9712	3.3069	3.551
41	1.6829	2.0196	2.4208	2.7012	2.967	3.3013	3.5442
42	1.682	2.0181	2.4185	2.6981	2.963	3.2959	3.5378
43	1.6811	2.0167	2.4162	2.6951	2.9591	3.2909	3.5316
44	1.6802	2.0154	2.4142	2.6923	2.9555	3.2861	3.5258

45	1.6794	2.0141	2.4121	2.6896	2.9521	3.2815	3.5202
46	1.6787	2.0129	2.4102	2.687	2.9488	3.2771	3.5149
47	1.6779	2.0117	2.4083	2.6846	2.9456	3.2729	3.5099
48	1.6772	2.0106	2.4066	2.6822	2.9426	3.2689	3.5051
49	1.6766	2.0096	2.4049	2.68	2.9397	3.2651	3.5004
50	1.6759	2.0086	2.4033	2.6778	2.937	3.2614	3.496
51	1.6753	2.0076	2.4017	2.6757	2.9343	3.2579	3.4917
52	1.6747	2.0066	2.4002	2.6737	2.9318	3.2545	3.4877
53	1.6741	2.0057	2.3988	2.6718	2.9293	3.2513	3.4838
54	1.6736	2.0049	2.3974	2.67	2.927	3.2482	3.48
55	1.673	2.0041	2.3961	2.6682	2.9247	3.2451	3.4764
56	1.6725	2.0032	2.3948	2.6665	2.9225	3.2423	3.473
57	1.672	2.0025	2.3936	2.6649	2.9204	3.2394	3.4696
58	1.6715	2.0017	2.3924	2.6633	2.9184	3.2368	3.4663
59	1.6711	2.001	2.3912	2.6618	2.9164	3.2342	3.4632
60	1.6706	2.0003	2.3901	2.6603	2.9146	3.2317	3.4602
61	1.6702	1.9996	2.389	2.6589	2.9127	3.2293	3.4573
62	1.6698	1.999	2.388	2.6575	2.911	3.2269	3.4545
63	1.6694	1.9983	2.387	2.6561	2.9092	3.2247	3.4518
64	1.669	1.9977	2.386	2.6549	2.9076	3.2225	3.4491
65	1.6686	1.9971	2.3851	2.6536	2.906	3.2204	3.4466
66	1.6683	1.9966	2.3842	2.6524	2.9045	3.2184	3.4441
67	1.6679	1.996	2.3833	2.6512	2.903	3.2164	3.4417
68	1.6676	1.9955	2.3824	2.6501	2.9015	3.2144	3.4395
69	1.6673	1.995	2.3816	2.649	2.9001	3.2126	3.4372
70	1.6669	1.9944	2.3808	2.6479	2.8987	3.2108	3.435
71	1.6666	1.9939	2.38	2.6468	2.8974	3.209	3.4329
72	1.6663	1.9935	2.3793	2.6459	2.8961	3.2073	3.4308
73	1.666	1.993	2.3785	2.6449	2.8948	3.2056	3.4288
74	1.6657	1.9925	2.3778	2.6439	2.8936	3.204	3.4269
75	1.6654	1.9921	2.3771	2.643	2.8925	3.2025	3.425
76	1.6652	1.9917	2.3764	2.6421	2.8913	3.201	3.4232
77	1.6649	1.9913	2.3758	2.6412	2.8902	3.1995	3.4214
78	1.6646	1.9909	2.3751	2.6404	2.8891	3.198	3.4197
79	1.6644	1.9904	2.3745	2.6395	2.888	3.1966	3.418
80	1.6641	1.9901	2.3739	2.6387	2.887	3.1953	3.4164
81	1.6639	1.9897	2.3733	2.6379	2.8859	3.1939	3.4147
82	1.6636	1.9893	2.3727	2.6371	2.885	3.1926	3.4132
83	1.6634	1.9889	2.3721	2.6364	2.884	3.1913	3.4117
84	1.6632	1.9886	2.3716	2.6356	2.8831	3.1901	3.4101
85	1.663	1.9883	2.371	2.6349	2.8821	3.1889	3.4087
86	1.6628	1.9879	2.3705	2.6342	2.8813	3.1877	3.4073
87	1.6626	1.9876	2.37	2.6335	2.8804	3.1866	3.4059

88	1.6623	1.9873	2.3695	2.6328	2.8795	3.1854	3.4046
89	1.6622	1.987	2.369	2.6322	2.8787	3.1844	3.4032
90	1.662	1.9867	2.3685	2.6316	2.8779	3.1833	3.402
91	1.6618	1.9864	2.368	2.6309	2.8771	3.1822	3.4006
92	1.6616	1.9861	2.3676	2.6303	2.8763	3.1812	3.3995
93	1.6614	1.9858	2.3671	2.6297	2.8755	3.1802	3.3982
94	1.6612	1.9855	2.3667	2.6292	2.8748	3.1792	3.397
95	1.661	1.9852	2.3662	2.6286	2.8741	3.1782	3.3959
96	1.6609	1.985	2.3658	2.628	2.8734	3.1773	3.3947
97	1.6607	1.9847	2.3654	2.6275	2.8727	3.1764	3.3936
98	1.6606	1.9845	2.365	2.6269	2.872	3.1755	3.3926
99	1.6604	1.9842	2.3646	2.6264	2.8713	3.1746	3.3915
100	1.6602	1.984	2.3642	2.6259	2.8706	3.1738	3.3905
101	1.6601	1.9837	2.3638	2.6254	2.87	3.1729	3.3894
102	1.6599	1.9835	2.3635	2.6249	2.8694	3.172	3.3885
103	1.6598	1.9833	2.3631	2.6244	2.8687	3.1712	3.3875
104	1.6596	1.983	2.3627	2.624	2.8682	3.1704	3.3866
105	1.6595	1.9828	2.3624	2.6235	2.8675	3.1697	3.3856
106	1.6593	1.9826	2.362	2.623	2.867	3.1689	3.3847
107	1.6592	1.9824	2.3617	2.6225	2.8664	3.1681	3.3838
108	1.6591	1.9822	2.3614	2.6221	2.8658	3.1674	3.3829
109	1.6589	1.982	2.3611	2.6217	2.8653	3.1667	3.382
110	1.6588	1.9818	2.3607	2.6212	2.8647	3.166	3.3812
111	1.6587	1.9816	2.3604	2.6208	2.8642	3.1653	3.3803
112	1.6586	1.9814	2.3601	2.6204	2.8637	3.1646	3.3795
113	1.6585	1.9812	2.3598	2.62	2.8632	3.164	3.3787
114	1.6583	1.981	2.3595	2.6196	2.8627	3.1633	3.3779
115	1.6582	1.9808	2.3592	2.6192	2.8622	3.1626	3.3771
116	1.6581	1.9806	2.3589	2.6189	2.8617	3.162	3.3764
117	1.658	1.9805	2.3586	2.6185	2.8612	3.1614	3.3756
118	1.6579	1.9803	2.3583	2.6181	2.8608	3.1607	3.3749
119	1.6578	1.9801	2.3581	2.6178	2.8603	3.1601	3.3741
120	1.6577	1.9799	2.3578	2.6174	2.8599	3.1595	3.3735
121	1.6575	1.9798	2.3576	2.6171	2.8594	3.1589	3.3727
122	1.6574	1.9796	2.3573	2.6168	2.859	3.1584	3.3721
123	1.6573	1.9794	2.3571	2.6164	2.8585	3.1578	3.3714
124	1.6572	1.9793	2.3568	2.6161	2.8582	3.1573	3.3707
125	1.6571	1.9791	2.3565	2.6158	2.8577	3.1567	3.37
126	1.657	1.979	2.3563	2.6154	2.8573	3.1562	3.3694
127	1.657	1.9788	2.3561	2.6151	2.8569	3.1556	3.3688
128	1.6568	1.9787	2.3559	2.6148	2.8565	3.1551	3.3682
129	1.6568	1.9785	2.3556	2.6145	2.8561	3.1546	3.3676
130	1.6567	1.9784	2.3554	2.6142	2.8557	3.1541	3.3669

131	1.6566	1.9782	2.3552	2.6139	2.8554	3.1536	3.3663
132	1.6565	1.9781	2.3549	2.6136	2.855	3.1531	3.3658
133	1.6564	1.9779	2.3547	2.6133	2.8546	3.1526	3.3652
134	1.6563	1.9778	2.3545	2.613	2.8542	3.1522	3.3646
135	1.6562	1.9777	2.3543	2.6127	2.8539	3.1517	3.3641
136	1.6561	1.9776	2.3541	2.6125	2.8536	3.1512	3.3635
137	1.6561	1.9774	2.3539	2.6122	2.8532	3.1508	3.363
138	1.656	1.9773	2.3537	2.6119	2.8529	3.1503	3.3624
139	1.6559	1.9772	2.3535	2.6117	2.8525	3.1499	3.3619
140	1.6558	1.9771	2.3533	2.6114	2.8522	3.1495	3.3614
141	1.6557	1.9769	2.3531	2.6112	2.8519	3.1491	3.3609
142	1.6557	1.9768	2.3529	2.6109	2.8516	3.1486	3.3604
143	1.6556	1.9767	2.3527	2.6106	2.8512	3.1482	3.3599
144	1.6555	1.9766	2.3525	2.6104	2.851	3.1478	3.3594
145	1.6554	1.9765	2.3523	2.6102	2.8506	3.1474	3.3589
146	1.6554	1.9764	2.3522	2.6099	2.8503	3.147	3.3584
147	1.6553	1.9762	2.352	2.6097	2.85	3.1466	3.3579
148	1.6552	1.9761	2.3518	2.6094	2.8497	3.1462	3.3575
149	1.6551	1.976	2.3516	2.6092	2.8494	3.1458	3.357
150	1.6551	1.9759	2.3515	2.609	2.8491	3.1455	3.3565

APPENDIX 8

F-TABLE FOR F-TEST

df 2(N-k)	Df1(k-1)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	161	199	216	225	230	234	237	239	241	242	243	244	245	245	246
2	18.51	19	19.16	19.25	19.3	19.33	19.35	19.37	19.38	19.4	19.4	19.41	19.42	19.42	19.43
3	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81	8.79	8.76	8.74	8.73	8.71	8.7
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6	5.96	5.94	5.91	5.89	5.87	5.86
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77	4.74	4.7	4.68	4.66	4.64	4.62
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.1	4.06	4.03	4	3.98	3.96	3.94
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	3.64	3.6	3.57	3.55	3.53	3.51
8	5.32	4.46	4.07	3.84	3.69	3.58	3.5	3.44	3.39	3.35	3.31	3.28	3.26	3.24	3.22
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	3.14	3.1	3.07	3.05	3.03	3.01
10	4.96	4.1	3.71	3.48	3.33	3.22	3.14	3.07	3.02	2.98	2.94	2.91	2.89	2.86	2.85
11	4.84	3.98	3.59	3.36	3.2	3.09	3.01	2.95	2.9	2.85	2.82	2.79	2.76	2.74	2.72
12	4.75	3.89	3.49	3.26	3.11	3	2.91	2.85	2.8	2.75	2.72	2.69	2.66	2.64	2.62
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71	2.67	2.63	2.6	2.58	2.55	2.53
14	4.6	3.74	3.34	3.11	2.96	2.85	2.76	2.7	2.65	2.6	2.57	2.53	2.51	2.48	2.46
15	4.54	3.68	3.29	3.06	2.9	2.79	2.71	2.64	2.59	2.54	2.51	2.48	2.45	2.42	2.4
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54	2.49	2.46	2.42	2.4	2.37	2.35
17	4.45	3.59	3.2	2.96	2.81	2.7	2.61	2.55	2.49	2.45	2.41	2.38	2.35	2.33	2.31
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46	2.41	2.37	2.34	2.31	2.29	2.27
19	4.38	3.52	3.13	2.9	2.74	2.63	2.54	2.48	2.42	2.38	2.34	2.31	2.28	2.26	2.23

20	4.35	3.49	3.1	2.87	2.71	2.6	2.51	2.45	2.39	2.35	2.31	2.28	2.25	2.22	2.2
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37	2.32	2.28	2.25	2.22	2.2	2.18
22	4.3	3.44	3.05	2.82	2.66	2.55	2.46	2.4	2.34	2.3	2.26	2.23	2.2	2.17	2.15
23	4.28	3.42	3.03	2.8	2.64	2.53	2.44	2.37	2.32	2.27	2.24	2.2	2.18	2.15	2.13
24	4.26	3.4	3.01	2.78	2.62	2.51	2.42	2.36	2.3	2.25	2.22	2.18	2.15	2.13	2.11
25	4.24	3.39	2.99	2.76	2.6	2.49	2.4	2.34	2.28	2.24	2.2	2.16	2.14	2.11	2.09
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27	2.22	2.18	2.15	2.12	2.09	2.07
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25	2.2	2.17	2.13	2.1	2.08	2.06
28	4.2	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24	2.19	2.15	2.12	2.09	2.06	2.04
29	4.18	3.33	2.93	2.7	2.55	2.43	2.35	2.28	2.22	2.18	2.14	2.1	2.08	2.05	2.03
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21	2.16	2.13	2.09	2.06	2.04	2.01
31	4.16	3.3	2.91	2.68	2.52	2.41	2.32	2.25	2.2	2.15	2.11	2.08	2.05	2.03	2
32	4.15	3.29	2.9	2.67	2.51	2.4	2.31	2.24	2.19	2.14	2.1	2.07	2.04	2.01	1.99
33	4.14	3.28	2.89	2.66	2.5	2.39	2.3	2.23	2.18	2.13	2.09	2.06	2.03	2	1.98
34	4.13	3.28	2.88	2.65	2.49	2.38	2.29	2.23	2.17	2.12	2.08	2.05	2.02	1.99	1.97
35	4.12	3.27	2.87	2.64	2.49	2.37	2.29	2.22	2.16	2.11	2.07	2.04	2.01	1.99	1.96
36	4.11	3.26	2.87	2.63	2.48	2.36	2.28	2.21	2.15	2.11	2.07	2.03	2	1.98	1.95
37	4.11	3.25	2.86	2.63	2.47	2.36	2.27	2.2	2.14	2.1	2.06	2.02	2	1.97	1.95
38	4.1	3.24	2.85	2.62	2.46	2.35	2.26	2.19	2.14	2.09	2.05	2.02	1.99	1.96	1.94
39	4.09	3.24	2.85	2.61	2.46	2.34	2.26	2.19	2.13	2.08	2.04	2.01	1.98	1.95	1.93
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12	2.08	2.04	2	1.97	1.95	1.92
41	4.08	3.23	2.83	2.6	2.44	2.33	2.24	2.17	2.12	2.07	2.03	2	1.97	1.94	1.92
42	4.07	3.22	2.83	2.59	2.44	2.32	2.24	2.17	2.11	2.06	2.03	1.99	1.96	1.94	1.91
43	4.07	3.21	2.82	2.59	2.43	2.32	2.23	2.16	2.11	2.06	2.02	1.99	1.96	1.93	1.91
44	4.06	3.21	2.82	2.58	2.43	2.31	2.23	2.16	2.1	2.05	2.01	1.98	1.95	1.92	1.9
45	4.06	3.2	2.81	2.58	2.42	2.31	2.22	2.15	2.1	2.05	2.01	1.97	1.94	1.92	1.89

46	4.05	3.2	2.81	2.57	2.42	2.3	2.22	2.15	2.09	2.04	2	1.97	1.94	1.91	1.89
47	4.05	3.2	2.8	2.57	2.41	2.3	2.21	2.14	2.09	2.04	2	1.96	1.93	1.91	1.88
48	4.04	3.19	2.8	2.57	2.41	2.29	2.21	2.14	2.08	2.03	1.99	1.96	1.93	1.9	1.88
49	4.04	3.19	2.79	2.56	2.4	2.29	2.2	2.13	2.08	2.03	1.99	1.96	1.93	1.9	1.88
50	4.03	3.18	2.79	2.56	2.4	2.29	2.2	2.13	2.07	2.03	1.99	1.95	1.92	1.89	1.87
51	4.03	3.18	2.79	2.55	2.4	2.28	2.2	2.13	2.07	2.02	1.98	1.95	1.92	1.89	1.87
52	4.03	3.18	2.78	2.55	2.39	2.28	2.19	2.12	2.07	2.02	1.98	1.94	1.91	1.89	1.86
53	4.02	3.17	2.78	2.55	2.39	2.28	2.19	2.12	2.06	2.01	1.97	1.94	1.91	1.88	1.86
54	4.02	3.17	2.78	2.54	2.39	2.27	2.18	2.12	2.06	2.01	1.97	1.94	1.91	1.88	1.86
55	4.02	3.16	2.77	2.54	2.38	2.27	2.18	2.11	2.06	2.01	1.97	1.93	1.9	1.88	1.85
56	4.01	3.16	2.77	2.54	2.38	2.27	2.18	2.11	2.05	2	1.96	1.93	1.9	1.87	1.85
57	4.01	3.16	2.77	2.53	2.38	2.26	2.18	2.11	2.05	2	1.96	1.93	1.9	1.87	1.85
58	4.01	3.16	2.76	2.53	2.37	2.26	2.17	2.1	2.05	2	1.96	1.92	1.89	1.87	1.84
59	4	3.15	2.76	2.53	2.37	2.26	2.17	2.1	2.04	2	1.96	1.92	1.89	1.86	1.84
60	4	3.15	2.76	2.53	2.37	2.25	2.17	2.1	2.04	1.99	1.95	1.92	1.89	1.86	1.84
61	4	3.15	2.76	2.52	2.37	2.25	2.16	2.09	2.04	1.99	1.95	1.91	1.88	1.86	1.83
62	4	3.15	2.75	2.52	2.36	2.25	2.16	2.09	2.03	1.99	1.95	1.91	1.88	1.85	1.83
63	3.99	3.14	2.75	2.52	2.36	2.25	2.16	2.09	2.03	1.98	1.94	1.91	1.88	1.85	1.83
64	3.99	3.14	2.75	2.52	2.36	2.24	2.16	2.09	2.03	1.98	1.94	1.91	1.88	1.85	1.83
65	3.99	3.14	2.75	2.51	2.36	2.24	2.15	2.08	2.03	1.98	1.94	1.9	1.87	1.85	1.82
66	3.99	3.14	2.74	2.51	2.35	2.24	2.15	2.08	2.03	1.98	1.94	1.9	1.87	1.84	1.82
67	3.98	3.13	2.74	2.51	2.35	2.24	2.15	2.08	2.02	1.98	1.93	1.9	1.87	1.84	1.82
68	3.98	3.13	2.74	2.51	2.35	2.24	2.15	2.08	2.02	1.97	1.93	1.9	1.87	1.84	1.82
69	3.98	3.13	2.74	2.5	2.35	2.23	2.15	2.08	2.02	1.97	1.93	1.9	1.86	1.84	1.81
70	3.98	3.13	2.74	2.5	2.35	2.23	2.14	2.07	2.02	1.97	1.93	1.89	1.86	1.84	1.81
71	3.98	3.13	2.73	2.5	2.34	2.23	2.14	2.07	2.01	1.97	1.93	1.89	1.86	1.83	1.81

72	3.97	3.12	2.73	2.5	2.34	2.23	2.14	2.07	2.01	1.96	1.92	1.89	1.86	1.83	1.81
73	3.97	3.12	2.73	2.5	2.34	2.23	2.14	2.07	2.01	1.96	1.92	1.89	1.86	1.83	1.81
74	3.97	3.12	2.73	2.5	2.34	2.22	2.14	2.07	2.01	1.96	1.92	1.89	1.85	1.83	1.8
75	3.97	3.12	2.73	2.49	2.34	2.22	2.13	2.06	2.01	1.96	1.92	1.88	1.85	1.83	1.8
76	3.97	3.12	2.72	2.49	2.33	2.22	2.13	2.06	2.01	1.96	1.92	1.88	1.85	1.82	1.8
77	3.97	3.12	2.72	2.49	2.33	2.22	2.13	2.06	2	1.96	1.92	1.88	1.85	1.82	1.8
78	3.96	3.11	2.72	2.49	2.33	2.22	2.13	2.06	2	1.95	1.91	1.88	1.85	1.82	1.8
79	3.96	3.11	2.72	2.49	2.33	2.22	2.13	2.06	2	1.95	1.91	1.88	1.85	1.82	1.79
80	3.96	3.11	2.72	2.49	2.33	2.21	2.13	2.06	2	1.95	1.91	1.88	1.84	1.82	1.79
81	3.96	3.11	2.72	2.48	2.33	2.21	2.12	2.05	2	1.95	1.91	1.87	1.84	1.82	1.79
82	3.96	3.11	2.72	2.48	2.33	2.21	2.12	2.05	2	1.95	1.91	1.87	1.84	1.81	1.79
83	3.96	3.11	2.71	2.48	2.32	2.21	2.12	2.05	1.99	1.95	1.91	1.87	1.84	1.81	1.79
84	3.95	3.11	2.71	2.48	2.32	2.21	2.12	2.05	1.99	1.95	1.9	1.87	1.84	1.81	1.79
85	3.95	3.1	2.71	2.48	2.32	2.21	2.12	2.05	1.99	1.94	1.9	1.87	1.84	1.81	1.79
86	3.95	3.1	2.71	2.48	2.32	2.21	2.12	2.05	1.99	1.94	1.9	1.87	1.84	1.81	1.78
87	3.95	3.1	2.71	2.48	2.32	2.2	2.12	2.05	1.99	1.94	1.9	1.87	1.83	1.81	1.78
88	3.95	3.1	2.71	2.48	2.32	2.2	2.12	2.05	1.99	1.94	1.9	1.86	1.83	1.81	1.78
89	3.95	3.1	2.71	2.47	2.32	2.2	2.11	2.04	1.99	1.94	1.9	1.86	1.83	1.8	1.78
90	3.95	3.1	2.71	2.47	2.32	2.2	2.11	2.04	1.99	1.94	1.9	1.86	1.83	1.8	1.78
91	3.95	3.1	2.7	2.47	2.31	2.2	2.11	2.04	1.98	1.94	1.9	1.86	1.83	1.8	1.78
92	3.94	3.1	2.7	2.47	2.31	2.2	2.11	2.04	1.98	1.94	1.89	1.86	1.83	1.8	1.78
93	3.94	3.09	2.7	2.47	2.31	2.2	2.11	2.04	1.98	1.93	1.89	1.86	1.83	1.8	1.78
94	3.94	3.09	2.7	2.47	2.31	2.2	2.11	2.04	1.98	1.93	1.89	1.86	1.83	1.8	1.77
95	3.94	3.09	2.7	2.47	2.31	2.2	2.11	2.04	1.98	1.93	1.89	1.86	1.82	1.8	1.77
96	3.94	3.09	2.7	2.47	2.31	2.19	2.11	2.04	1.98	1.93	1.89	1.85	1.82	1.8	1.77
97	3.94	3.09	2.7	2.47	2.31	2.19	2.11	2.04	1.98	1.93	1.89	1.85	1.82	1.8	1.77

98	3.94	3.09	2.7	2.46	2.31	2.19	2.1	2.03	1.98	1.93	1.89	1.85	1.82	1.79	1.77
99	3.94	3.09	2.7	2.46	2.31	2.19	2.1	2.03	1.98	1.93	1.89	1.85	1.82	1.79	1.77
100	3.94	3.09	2.7	2.46	2.31	2.19	2.1	2.03	1.97	1.93	1.89	1.85	1.82	1.79	1.77
101	3.94	3.09	2.69	2.46	2.3	2.19	2.1	2.03	1.97	1.93	1.88	1.85	1.82	1.79	1.77
102	3.93	3.09	2.69	2.46	2.3	2.19	2.1	2.03	1.97	1.92	1.88	1.85	1.82	1.79	1.77
103	3.93	3.08	2.69	2.46	2.3	2.19	2.1	2.03	1.97	1.92	1.88	1.85	1.82	1.79	1.76
104	3.93	3.08	2.69	2.46	2.3	2.19	2.1	2.03	1.97	1.92	1.88	1.85	1.82	1.79	1.76
105	3.93	3.08	2.69	2.46	2.3	2.19	2.1	2.03	1.97	1.92	1.88	1.85	1.81	1.79	1.76
106	3.93	3.08	2.69	2.46	2.3	2.19	2.1	2.03	1.97	1.92	1.88	1.84	1.81	1.79	1.76
107	3.93	3.08	2.69	2.46	2.3	2.18	2.1	2.03	1.97	1.92	1.88	1.84	1.81	1.79	1.76
108	3.93	3.08	2.69	2.46	2.31	2.18	2.1	2.03	1.97	1.92	1.88	1.84	1.81	1.78	1.76
109	3.93	3.08	2.69	2.45	2.3	2.18	2.09	2.02	1.97	1.92	1.88	1.84	1.81	1.78	1.76
110	3.93	3.08	2.69	2.45	2.3	2.18	2.09	2.02	1.97	1.92	1.88	1.84	1.81	1.78	1.76
111	3.93	3.08	2.69	2.45	2.3	2.18	2.09	2.02	1.97	1.92	1.88	1.84	1.81	1.78	1.76
112	3.93	3.08	2.69	2.45	2.3	2.18	2.09	2.02	1.96	1.92	1.88	1.84	1.81	1.78	1.76
113	3.93	3.08	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.92	1.87	1.84	1.81	1.78	1.76
114	3.92	3.08	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.84	1.81	1.78	1.75
115	3.92	3.08	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.84	1.81	1.78	1.75
116	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.84	1.81	1.78	1.75
117	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.84	1.8	1.78	1.75
118	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.84	1.8	1.78	1.75
119	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.83	1.8	1.78	1.75
120	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91	1.87	1.83	1.8	1.78	1.75
121	3.92	3.07	2.68	2.45	2.29	2.17	2.09	2.02	1.96	1.91	1.87	1.83	1.8	1.77	1.75
122	3.92	3.07	2.68	2.45	2.29	2.17	2.09	2.02	1.96	1.91	1.87	1.83	1.8	1.77	1.75
123	3.92	3.07	2.68	2.45	2.29	2.17	2.08	2.01	1.96	1.91	1.87	1.83	1.8	1.77	1.75

124	3.92	3.07	2.68	2.44	2.29	2.17	2.08	2.01	1.96	1.91	1.87	1.83	1.8	1.77	1.75
125	3.92	3.07	2.68	2.44	2.29	2.17	2.08	2.01	1.96	1.91	1.87	1.83	1.8	1.77	1.75
126	3.92	3.07	2.68	2.44	2.29	2.17	2.08	2.01	1.95	1.91	1.87	1.83	1.8	1.77	1.75
127	3.92	3.07	2.68	2.44	2.29	2.17	2.08	2.01	1.95	1.91	1.86	1.83	1.8	1.77	1.75
128	3.92	3.07	2.68	2.44	2.29	2.17	2.08	2.01	1.95	1.91	1.86	1.83	1.8	1.77	1.75
129	3.91	3.07	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.9	1.86	1.83	1.8	1.77	1.74
130	3.91	3.07	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.9	1.86	1.83	1.8	1.77	1.74
131	3.91	3.07	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.9	1.86	1.83	1.8	1.77	1.74
132	3.91	3.06	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.9	1.86	1.83	1.79	1.77	1.74
133	3.91	3.06	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.9	1.86	1.83	1.79	1.77	1.74
134	3.91	3.06	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.9	1.86	1.83	1.79	1.77	1.74
135	3.91	3.06	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.9	1.86	1.82	1.79	1.77	1.74
136	3.91	3.06	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.9	1.86	1.82	1.79	1.77	1.74
137	3.91	3.06	2.67	2.44	2.28	2.17	2.08	2.01	1.95	1.9	1.86	1.82	1.79	1.76	1.74
138	3.91	3.06	2.67	2.44	2.28	2.16	2.08	2.01	1.95	1.9	1.86	1.82	1.79	1.76	1.74
139	3.91	3.06	2.67	2.44	2.28	2.16	2.08	2.01	1.95	1.9	1.86	1.82	1.79	1.76	1.74
140	3.91	3.06	2.67	2.44	2.28	2.16	2.08	2.01	1.95	1.9	1.86	1.82	1.79	1.76	1.74
141	3.91	3.06	2.67	2.44	2.28	2.16	2.08	2	1.95	1.9	1.86	1.82	1.79	1.76	1.74
142	3.91	3.06	2.67	2.44	2.28	2.16	2.07	2	1.95	1.9	1.86	1.82	1.79	1.76	1.74
143	3.91	3.06	2.67	2.43	2.28	2.16	2.07	2	1.95	1.9	1.86	1.82	1.79	1.76	1.74
144	3.91	3.06	2.67	2.43	2.28	2.16	2.07	2	1.95	1.9	1.86	1.82	1.79	1.76	1.74
145	3.91	3.06	2.67	2.43	2.28	2.16	2.07	2	1.94	1.9	1.86	1.82	1.79	1.76	1.74
146	3.91	3.06	2.67	2.43	2.28	2.16	2.07	2	1.94	1.9	1.85	1.82	1.79	1.76	1.74
147	3.91	3.06	2.67	2.43	2.28	2.16	2.07	2	1.94	1.9	1.85	1.82	1.79	1.76	1.73
148	3.91	3.06	2.67	2.43	2.28	2.16	2.07	2	1.94	1.9	1.85	1.82	1.79	1.76	1.73
149	3.9	3.06	2.67	2.43	2.27	2.16	2.07	2	1.94	1.89	1.85	1.82	1.79	1.76	1.73

| 150 | 3.9 | 3.06 | 2.66 | 2.43 | 2.27 | 2.16 | 2.07 | 2 | 1.94 | 1.89 | 1.85 | 1.82 | 1.79 | 1.76 | 1.73 |