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#### **EXAMINATION OF HYPOTHESES IN MARKETING RESEARCH**

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**ABSTRACT**: Statistical data is derived based on the survey of respondents, in the following three areas of the Georgian consumer market: product prices, tuition fees in higher education, the number of people wishing to travel to the parts of Georgia. Using this marketing information, the task of examination hypotheses about the unknown average values of populations is solved.

KEYWORDS: respondent, data, statistics, hypothesis

#### **INTRODUCTION**

In marketing research, along with marketing methods, probabilistic-statistical methods are used [1], for example, regressive analysis is used in [2], [3], [4] papers. The article solves the problems of hypothesis examination in marketing research in the following three areas: prices of thirty products, tuition fees in four higher education institutions, the number of people wishing to travel to ten regions of Georgia. Remarkably, the marketing information was obtained is a result of the survey of respondents of Tbilisi. Current and acceptable prices for products and higher education tuition fees are discussed.

Consider any X population. In our case, it is the abundance of current and user-named prices of products, the abundance of prices for higher education, the abundance of those wishing to travel. We note the unknown mean value of the symbol population. Suppose x1, ..., xn is a sample of n volumes taken from the X population - the results of n population observations. Consider the null basic hypothesis H0: a = a0 and the opposite H1: a > a0. Where a is the unknown mean value of the population X. The task of testing hypotheses is as follows: We need to use sampling to make a criterion based on which we can decide whether to accept or reject the H0 hypothesis. The following form of the criterion  $t = \frac{\bar{X} - a0}{r} \int_{n}^{n} test$ : where X<sup>-</sup> is the selective mean, s is the selective standard deviation. H0 Hypothesis refection or critical area: t> tn-1,  $\alpha$ ; Where tn-1,  $\alpha$  is the critical point of the student distribution, and  $\alpha$  is a definite number, for example,  $\alpha = 0.05$ .

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Popula					Pri	nt ISSN:	2053-4	043(Print).	Online	ISSN: 20	053-405	l(Online)
	tion ave	rage		α	and dispe	ersion	$\sigma^2$	is unknown				
Produ	ct 1. Ric	e										
	.3.1. Cu											
t	1	2	3	4	5	6	7	8	9	10	11	12
price	1	1	1.2	1.2	1.2	1.2	1.5	1.7	1.7	1.7	1.9	1.9
						$H_1 : a >$						
<i>n</i> = 1	2, $\bar{X} = 1$	1.433	$s = \frac{m}{m}$	$ax x_i - m$	$\frac{1}{x_i}$	0.225	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{X}{s/s}$	$\frac{1}{\sqrt{n}}$	-2.566
Decisio	on: It is f	air			$H_0$	hypothesis	6					
	ct 1. Ric											
				ne custon		_	_					
t	1	2	3	4	5	6	7	0.7	9	10	11	12
price	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	1	1
						$H_1:a >$				_		
<i>n</i> = 1	2, $\bar{X} =$	0.7	$s = \frac{ma}{ma}$	$x x_i - mi$ 4	$n x_i$	0.125	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{X}{s/s}$	$\frac{a}{\sqrt{n}} =$	-1.3856
Decisio	n: It is f	air			$H_0$	hypothesis	6					
Produc	t 2. Buc	kwhea	t									
Table 2	.3.3. Cu	rront n										
t		ment pr	rices									
	1			4	5	6	7	8	9	10	11	12
price	1 1.2			4	5 1.4	6 1.5	7	8	9 1.8	10 1.8	<u>11</u> 2	<u>12</u> 2
		2	3 1.2			6 1.5 <i>H</i> <sub>1</sub> : <i>a</i> >		8	9 1.8	10 1.8		<u>12</u> 2
hypoth	esis H	2 1.2 I <sub>0</sub> : a=	3 1.2 1.5 a	lternativ	е	<i>H</i> <sub>1</sub> : <i>a</i> >	> 1.5	8 1.8 t <sub>11;0,05</sub>			2	2
hypoth $n = 1$	esis H	2 1.2 $I_0: a=$ 1.575	3 1.2 1.5 a	lternativ	e in x <sub>i</sub> _	<i>H</i> <sub>1</sub> : <i>a</i> >	> 1.5 α=0.05				2	2
hypoth $n = 1$ Decisio	esis $H$ 2, $\overline{X} = 1$	2 1.2 $I_0: a =$ 1.575 air	$\frac{3}{1.2}$ 1.5 a $s = \frac{ma}{s}$	lternativ	e in x <sub>i</sub> _	<i>H</i> <sub>1</sub> : <i>a</i> >	> 1.5 α=0.05				2	2
hypoth $n = 1$ Decisio	esis $H$ 2, $\overline{X} = 1$ n: It is fa <b>t 2. Buc</b>	2 1.2 1.2 1.575 air <b>kwhea</b>	$\frac{3}{1.2}$ $1.5  a$ $s = \frac{ma}{5}$ t	lternativ	e in x <sub>i</sub> H <sub>0</sub>	<i>H</i> <sub>1</sub> : <i>a</i> >	> 1.5 α=0.05				2	2
hypoth $n = 1$ Decisio	esis $H$ 2, $\overline{X} = 1$ n: It is fa <b>t 2. Buc</b> .3.4. Prio	2 1.2 <i>I</i> <sub>0</sub> : a= 1.575 air <b>kwhea</b> ces nan	$\frac{3}{1.2}$ $1.5  \text{a}$ $s = \frac{ma}{s}$ $t$ ned by th	lternative ax x <sub>i</sub> -mi 4 ne custon	e in x <sub>i</sub> H <sub>0</sub> ner	H <sub>1</sub> : a > 0.2 hypothesis	> 1.5 α=0.05	t <sub>11:0.05</sub>	= 2.7	$t = \frac{\bar{x}}{s/s}$	$\frac{2}{\sqrt[n]{n}} =$	2
hypothe $n = 1$ Decisio <b>Produc</b> Table 2	esis $H$ 2, $\overline{X} = 1$ n: It is fa <b>t 2. Buc</b> .3.4. Prio	2 1.2 <i>I</i> <sub>0</sub> : a= 1.575 air <b>kwhea</b> ces nan	$\frac{3}{1.2}$ $1.5  \text{a}$ $s = \frac{ma}{s}$ $t$ ned by th	lternative ax x <sub>i</sub> -mi 4 ne custon	e in x <sub>i</sub> H <sub>0</sub> ner	H <sub>1</sub> : a > 0.2 hypothesis	> 1.5 α=0.05		= 2.7	$t = \frac{\bar{x}}{s/s}$	$\frac{2}{\sqrt[n]{n}} =$	2
hypothe n = 1 Decisio <b>Produc</b> Table 2 <u>t</u> price hypothe	esis $H$ 2, $\overline{X} = 1$ n: It is fa <b>t 2. Buc</b> .3.4. Prid 1 0.4 esis $H$	$\frac{2}{1.2}$ $I_0: a =$ 1.575 air <b>kwhea</b> ces nan $\frac{2}{0.4}$ $I_0: a =$	$\frac{3}{1.2}$ $1.5 \text{ a}$ $s = \frac{\text{ma}}{1}$ t ned by th $\frac{3}{0.4}$ $0.4 \text{ a}$	$\frac{4}{100000000000000000000000000000000000$	$\frac{\ln x_i}{H_0}$ her $\frac{5}{0.5}$	$H_1: a >$ 0.2 hypothesis $\frac{6}{0.5}$ $H_1: a >$	<ul> <li>&gt; 1.5</li> <li>α=0.05</li> <li>7</li> <li>0.5</li> <li>&gt; 0.4</li> </ul>	t <sub>11:0.05</sub> 8 0.5	9 0.5	$t = \frac{\bar{x}}{s/s}$ 10 0.5	$\frac{2}{\sqrt{n}} = \frac{11}{0.5}$	2 1.299 <u>12</u> 0.5
hypothe n = 1 Decisio <b>Produc</b> Table 2 <u>t</u> price hypothe	esis $H$ 2, $\overline{X} = 1$ n: It is fa <b>t 2. Buc</b> .3.4. Prid 1 0.4 esis $H$	$\frac{2}{1.2}$ $I_0: a =$ 1.575 air <b>kwhea</b> ces nan $\frac{2}{0.4}$ $I_0: a =$	$\frac{3}{1.2}$ $1.5 \text{ a}$ $s = \frac{\text{ma}}{1}$ t ned by th $\frac{3}{0.4}$ $0.4 \text{ a}$	$\frac{4}{100000000000000000000000000000000000$	$\frac{\ln x_i}{H_0}$ her $\frac{5}{0.5}$	$H_1: a >$ 0.2 hypothesis $\frac{6}{0.5}$ $H_1: a >$	<ul> <li>&gt; 1.5</li> <li>α=0.05</li> <li>7</li> <li>0.5</li> <li>&gt; 0.4</li> </ul>	t <sub>11:0.05</sub>	9 0.5	$t = \frac{\bar{x}}{s/s}$ 10 0.5	$\frac{2}{\sqrt{n}} = \frac{11}{0.5}$	2 1.299 <u>12</u> 0.5

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Produc												
		Current p		л	5	6	7	Q	0	10	11	12
t price		2	2	4	2.2	2.2	2.3	2.3	2.3	2.3		2.3
				alternative		$H_1 : a$				•		
<i>n</i> = 1	2, <del>X</del>	_ 2.2	<i>s</i> = -	max x <sub>i</sub> -mi 4	n x <sub>i</sub>	0.075	<mark>α=0.0</mark> 5	t <sub>11;0,0</sub>	<sub>5</sub> = 2.7	$t = \frac{\lambda}{s_i}$	$\frac{\overline{\alpha}-a}{\sqrt{n}} =$	4.6188
Decisio	n: It i	s fair			$H_1$	hypothe	sis					
Produc	t 3. P	asta										
Table 2	.3.6.	Prices na	med by	the custom	er							
t	1	L 2	3	3 4 L 1.2	5	6 <b>6</b>	7	8	9	10	11	12
price	1	l 1	1	l 1.2	1	l 1	1	1.2	1.2	1.2	1	1
hypoth	esis	<i>H</i> <sub>0</sub> :a=	1.05	alternative	;	$H_1: a$	> 1.05					
<i>n</i> = 1	2, <del>X</del>	<u> </u>	<i>s</i> =	max x <sub>i</sub> -mi 4	n x <sub>i</sub>	0.05	α=0.05	t <sub>11;0,0</sub>	<sub>5</sub> = 2.7	$t = \frac{\dot{\lambda}}{s_{f}}$	$\frac{\overline{x}-a}{\sqrt{n}} =$	1.1547
Decisio	n: It i	s fair			$H_0$	hypothe	sis					
Produc	t 4. V	Vheat Bre	ad									
		Current p										
t	1	2	3	4	5	6	7	8	9	10	11	12
price	1.5	1.5	1.5	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9
				alternative		-						
n = 1	2, <del>X</del> =	<u> </u>	<i>s</i> =	max x <sub>i</sub> -mi 4	n x <sub>i</sub>	0.1	α=0.05	t <sub>11;0,0</sub>	5 = 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{1}{\sqrt{n}} =$	8.6603
Decisio	n: It i	s fair			$H_1$	hypothe	sis					
Produc	t 4. V	Vheat Bre	ad									
Table 2	.3.8.	Prices nai	med by	the custom	er							
t	1	. 2	3	3 4	5	6 6	7	8	9	10	11	12
price	0.5	6 <b>0.5</b>	0.6	5 <b>0.6</b>	0.6	<b>0.5</b>	0.5	0.5	0.6	0.5	0.5	0.5
hypothe	esis	<i>H</i> <sub>0</sub> : a=	0.5	alternative	!	$H_{1}: a$	2 > 0.5					
n = 1	2, <del>X</del> =	<u> </u>	<i>s</i> =	$\frac{\max x_i - \min}{4}$	n <i>x<sub>i</sub></i>	0.025	<mark>α=0.05</mark>	t <sub>11;0,0</sub>	5 = 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{1}{\sqrt{n}} =$	4.6188
Decisio	n: It i	s fair			$H_1$	hypothe	sis					

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Produc	ct 5 V	Wheat Flo	our		1		<u>_</u> 000 -TV	<u>, , , , , , , , , , , , , , , , , , , </u>	, omit	100111	<u>2000</u> TUU	<u></u>
		Current p										
t	1		_	4	5	6	7	8	9	10	11	12
price	2	2	3	2	1.8	1.8	1.8	2	9 2	2	2.2	2.2
hypoth	esis	<i>H</i> <sub>0</sub> : a=	: 2	alternat	ive	$H_1$ :	a > 2					
<i>n</i> = 1	L2, <del>X</del>	<u> </u>	<i>s</i> =	$\frac{\max x_i - x_i}{4}$	min x <sub>i</sub>	0.1	α=0.05	t <sub>11;0</sub>	<sub>0,05</sub> = 2.7	t =	$=\frac{\bar{X}-a}{s/\sqrt{n}}=$	-0.5774
Decisio	on: It i	is fair			$H_0$	hypothe	esis					
Produc	ct 5. V	Wheat Flo	bur									
Table 2	2.3.10	). Prices n	amed	by the cus	tomer							
t	1	2	3	4	5	6	7	8	9	10	11	12
price	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.8
nypoth	esis	<i>Н</i> о:а=	0.7	alternat	ive	$H_{1} : a$	a > 1.9					
<i>n</i> = 1	12, <del>X</del>	<u>=</u> 0.825	<i>s</i> =	$\frac{\max x_i - x_i}{\Delta}$	min x <sub>i</sub> _	0.025	<mark>α=0.05</mark>	t <sub>11;0</sub>	<sub>0,05</sub> = 2.7	<i>t</i> =	$=\frac{\bar{X}-a}{s/\sqrt{n}}=$	17.321
Decisio				1		hypothe						
		<b>orn Flou</b> . Current 2	prices	4	5	6	7	8	9	10	11	12
price		1.8	1.8	1.8	2	6 2	2	2.2	2.2	2.2	2	1.8
			1.9	alternati								
<i>n</i> = 1	2, <del>X</del> =	_ 1.967	<i>s</i> =	$\frac{\max x_i - 1}{4}$	$\min x_i_{=}$	0.1	α=0.05	t <sub>11;0</sub>	, <sub>05</sub> = 2.7	<i>t</i> =	$\frac{\bar{X}-a}{s/\sqrt{n}}=$	2.3094
Decisio	n: It i	s fair			$H_0$	hypothe	sis					
Produc	t 6. C	orn Flou	r									
Table 2	.3.12	. Prices n	amed l	by the cust	tomer							
t	1	2	3	4	5	6	7	8	9 1.1	10	11	12 1.2
price	1	1	1	1	1	1	1.1	1.1	1.1	1.2	1.2	1.2
				alternati		$H_1:a$					_	
<i>n</i> = 1	2, <i>X</i> =	<u> </u>	<i>s</i> =	$\frac{\max x_i - 1}{4}$	$\min x_i$	0.05	α=0.05	t <sub>11;0</sub>	<sub>,05</sub> = 2.7	<i>t</i> =	$\frac{\bar{X}-a}{s/\sqrt{n}}=$	-1.7321
Decisio	n: It i	s fair			$H_0$	hypothe	sis					

#### British Journal of Marketing Studies Vol. 8, Issue 5, Pp.13-30, September 2020 Published by ECRTD- UK Print ISSN: 2053-4043(Print), Online ISSN: 2053-4051(Online) Product 7. Beef Table 2.3.13. Current prices 4 5 6 7 14 15 15 14 8 16 9 16 t 1 2 16 15 15 price hypothesis $H_0: a=$ 15.1 alternative $H_1: a > 15.1$ $n = 12, \bar{X} = 14.83$ $S = \frac{\max x_i - \min x_i}{4} = 0.5$ $\alpha = 0.05$ $t_{11;0,05} = 2.7$ $t = \frac{\bar{X} - a}{s/\sqrt{n}} = -1.8475$ Decision: It is fair $H_0$ hypothesis Product 7. Beef Table 2.3.14. Prices named by the customer t 1 2 3 4 5 6 7 8 9 10 11 12 price 7 7 7 8 7 8 8 7 7 7 8 8 hypothesis $H_0: a= 7.51$ alternative $H_1: a > 7.51$ $n = 12, \bar{X} = 7.417$ $S = \frac{\max x_i - \min x_i}{4} = 0.25$ $\alpha = 0.05$ $t_{11:0.05} = 2.7$ $t = \frac{\bar{X} - \alpha}{s/\sqrt{n}} = -1.2933$ Decision: It is fair $H_0$ hypothesis Product 8. Pork Table 2.3.15. Current prices t 1 2 3 4 5 6 7 8 9 10 11 price 9 9 9 10 10 9 9 10 10 12 11 hypothesis $H_0: a= 9.51$ alternative $H_1: a > 9.51$ $n = 12, \bar{X} = 9.667$ $S = \frac{\max x_i - \min x_i}{4} = 0.5$ $\alpha = 0.05$ $t_{11;0,05} = 2.7$ $t = \frac{\bar{X} - \alpha}{s/\sqrt{n}} = 0.5$ 1.0854 Decision: It is fair $H_0$ hypothesis Product 8. Pork Table 2.3.16. Prices named by the customer t 1 2 3 4 5 6 7 8 9 10 11 12 price 5 5 5 5 7 7 7 6 6 6 5 5 price hypothesis $H_0: a = 5.51$ alternative $H_1: a > 5.51$ $n = 12, \bar{X} = 5.75$ $S = \frac{\max x_i - \min x_i}{4} = 0.5$ $\alpha = 0.05$ $t_{11;0,05} = 2.7$ $t = \frac{\bar{X} - a}{s/\sqrt{n}} = 0.5$ 1.6628

Decision: It is fair

H<sub>0</sub> hypothesis

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						10001			, 0111110	10011120		1(011110
Produc	t 9. C	hicken										
		. Current	nrices									
				1	5	6	7	0	0	10	11	10
t price	1	2	3	4	5	5	, 5	<u>8</u> 5	5	6	7	7
price	4	4	4	0	5	5	5	5	0	0	,	,
hypoth	esis	H. ·	5.51 a	Iternativ	/e	и.а						
										_		
n = 1	$2\overline{X}$	_ 5.333	$s = \frac{m}{m}$	ax x <sub>i</sub> -n	nin x <sub>i</sub> _	0.75	<b>α=0.05</b>	t <sub>11;0,0</sub>	= 2.7	$t = \frac{X}{2}$	<u>-a</u>	-0.816
<i>n</i> 1	2,1		3	4	_			•11;0,0	5 217	s/	$\sqrt{n}$	
Decisio	n: It i	s fair			$H_0$	hypothe	sis					
					Ū							
Produc	t 9. C	hicken										
Table 2	.3.2.	Prices na	med by th	e custo	mer							
t	1	2	3	4	5	6	7	8	9	10	11	12
price	3	3	3	3	3.5	3.5	4	4	3	3	3.5	3.5
ypoth	esis	<i>H</i> <sub>0</sub> : a=	3.51 a	lternativ	/e	$H_1 : a$	> 3.51					
										$\bar{v}$	- 2	
n = 1	2, <del>X</del> =	_ 3.333	$s = \frac{m}{m}$	$ax x_i - n$	$\frac{111 x_i}{2}$	0.25	α=0.05	t <sub>11;0,0</sub>	<sub>5</sub> = 2.7	$t = \frac{\Lambda}{s/s}$	$\frac{-a}{\sqrt{n}} =$	-2.448
				4						-,	•••	
Decisio	n: It i	s fair			$H_0$	hypothe	sis					
Produc	t 10. I	Minced I	Beef									
		Current										
				4	5	6	7	8	9	10	11	12
price	14	14	14	. 14.5	14.5	15	15	8 15	15	10 16	15	15
	1.	1.		11.5	1	10	10	10	10	10	10	10
wpothe	esis	$H_{a} \cdot a =$	13.51 a	Iternativ	/e	Н·а	> 135					
$n - 1^{-1}$	2 7 -	- 14.75	c _ ma	$x x_i - m$	$\ln x_i$	0.5	α=0.05	t <sub>11;0,0</sub>	= 27	$t = -\overline{X}$	a	8.591
n - 1	2, A -		s – —	4	=			°11;0,0	5 - 2.7	s/	$\sqrt{n}$	
Decisio						hypothes						
					1							
Produc	t 10.	Minced B	Beef									
			amed by t	he custo	omer							
			-			6	7	8	9	10	11	12
price	5	5	6	5	5	6	6	8	5	5	6	5
	_	-	-	-		0	5	5	-	-	5	-
wpothe	esis	H <sub>c</sub> :a=	5.51 a	Iternativ	/e	H · a	5551					
						_					_	
n - 1	2 2 -	- 5,417	c - m	ax x <sub>i</sub> -n	nin x <sub>i</sub>	0.25	α=0.05	t <sub>11;0,0</sub>	_ = 27	$t = -\overline{X}$	i-a	-1.2933
n = 1	<i>2,</i> л =		5	4	=		a 5.65	<sup>c</sup> 11;0,0	5 - 2.7	c — s/	$\sqrt{n}$	2.2000
Decisio	n: It is	fair			H_	hypothes	sis					
					110							

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			(1 - 1 - 1)		Prir	<u>it ISSN:</u>	2053-40	43(Print),	Online	<u>ISSN: 20</u>	53-4051	(Online)
			s (boiled)									
Table 2.			-	4	5	6	7	8	9	10	11	12
price	7	7	3	8	8	8	9	9	9	10	9	9
			8.5 alt							_		
n = 12	2, $\bar{X} =$	8.417	$s = \frac{\max}{s}$	$\frac{x_i - \min}{4}$	<u>x<sub>i</sub></u> 0	).75	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{X}{s/s}$	$\frac{-a}{\sqrt{n}} =$	-0.3849
Decisior	n: It is i	fair			H <sub>0</sub>	ypothesi	s					
Product	11 5		s (boiled)									
			amed by th	e custom	er							
						6	7	8	9	10	11	12
price	4	4	3	3	3	3	4	4	3	3	4	3
hypothe	esis ,	H <sub>n</sub> :a=	3.5 alt	ernative		<i>H</i> <sub>1</sub> : <i>a</i> >	> 3.5					
n = 12	2, $\bar{X} =$	3.417	$s = \frac{max}{max}$	$\frac{x_i - \min}{4}$	$\frac{x_i}{x_i} = 0$	).25	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{-a}{\sqrt{n}} =$	-1.1547
Decisior	n: It is i	fair			H <sub>0</sub>	ypothesi	s					
Table 2.	3.23. (	Current			-	-	_					40
t price	1 10	2 10	3 12	4	5 11	6 11	7	8	9 12	10 12	11 13	12 13
hypothe	esis	H <sub>0</sub> :a=	11.5 alt	ernative		<i>H</i> <sub>1</sub> : <i>a</i> >	> 11.5			_		
n = 12	$2, \bar{X} =$	11.33	$s = \frac{\max}{2}$	$\frac{x x_i - \min}{4}$	$\frac{x_i}{x_i}$	).75	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{X^2}{s/s}$	$\frac{-a}{\sqrt{n}} =$	-0.7698
Decisior	n: It is	fair			H <sub>0</sub>	ypothesi	s					
		_	s (smoked)		~~							
			amed by th			6	7	Q	0	10	11	12
price	3	4	3	5	3	3	3	4	3	3	4	4
hypothe			3.5 alt						5	5		
n = 12	2, $\bar{X} =$	3.583	$s = \frac{\max}{s}$	$\frac{x_i - \min}{4}$	<u>x<sub>i</sub></u> _ 0	).5	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{-a}{\sqrt{n}} =$	0.5774
Decisior	n: It is	fair			H <sub>0</sub>	nypothesi	s					

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Duesto	. 12 .		lugarder		111		<u>2000-4</u> 0	//////////////////////////////////////	, onno	- 10011.20	<u>555-40</u> 2	
		Current	s (regular) prices									
t t				4	5	6	7	8	9	10	11	12
price	9	9	9	8	8	10	7 10	8	9	10 9	10	
			9 a									
n = 1	2, <i>X</i> =	<u>-</u> 9.167	$s = \frac{ma}{s}$	$x_i - m_i$	$\frac{\ln x_i}{2}$	0.5	α=0.05	t <sub>11;0,05</sub>	; = 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{1}{\sqrt{n}} =$	1.1547
Decisio	n: It is	fair			H <sub>0</sub>	nypothesi	is					
Produc	t 13. S	Sausages	(regular	)								
Table 2	.3.26.	Prices na	amed by t	he custo	mer							
t	1	2	3	4	5	6	7	8	9	10 4	11	12
price	3	3	4	3	4	4	4	3	4	4	5	4
n = 1			$s = \frac{m}{s}$	ax <i>x<sub>i</sub></i> -m 4		0.5 hypothesi		t <sub>11;0,05</sub>	; = 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{a}{\sqrt{n}} =$	-1.7321
Table 2.	3.27.	Fresh Fis Current	prices	4	5	6	7	o	٥	10	11	10
nrice	12	12	2 12	4	5 15	1/	1/	12	9	10 14	11	12
			14 a $s = \frac{ma}{ma}$					t <sub>11;0,05</sub>	= 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{-a}{\sqrt{n}} =$	-1.1547
				4						5/	v n	
Decisior	n: It is	fair			$H_0$	nypothesi	s					
		Fresh Fis	<b>h</b> amed by t	ha custa	mor							
t t	5.20. 1					6	7	Q	0	10	11	12
price	5	4	4	5	5	5	4	3	4	10 4	11 5	4
nypothe			4 a			_		_			_	
n = 12	2, <del>X</del> =	4.333	$s = \frac{ms}{s}$	$x_i - m$	$\frac{\ln x_i}{2}$	).5	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{-a}{\sqrt{n}} =$	2.3094
Decisior	n: It is	fair			$H_0$	nypothesi	s					

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					Prin	t ISSN:	2053-40	43(Print)	, Online	ISSN: 20	)53-405	1(Onlin
Produ	ct 15. F	Frozen Fi	sh									
Table 2	2.3.29.	Current p	orices									
t	1	2	3	4	5	6	7	8	9	10	11	12
price	7	7	7	8	7	7	8	8	8	10 8	7	7
hypoth	esis	H <sub>0</sub> :a=	7 a	lternative		$H_1:a$	> 7					
<i>n</i> = 1	2, <del>X</del> =	7.417	$s = \frac{m}{2}$	ax x <sub>i</sub> -mi 4	$\frac{\ln x_i}{2} = 0.$	25	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{-a}{\sqrt{n}} =$	5.7735
Decisio					H <sub>1</sub> hy							
Produ	ct 15. F	Frozen Fi	sh									
				he custor								
t	1	2	3	4	5	6	7	8	9	10 3	11	12
price	2	2	3	2	3	3	4	4	4	3	4	4
hypoth	esis	H <sub>0</sub> :a=	2.7 a	Iternative	e.	<i>H</i> <sub>1</sub> : <i>a</i> >	> 2.7					
<i>n</i> = 1	2, <del>X</del> =	3.167	$s = \frac{ma}{ma}$	$x_i - mi$	$\frac{n x_i}{x_i} = 0.$	5	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{-a}{\sqrt{n}} =$	3.233
Docisio		<b>.</b>										

Decision: It is fair

H<sub>1</sub> hypothesis

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Product 16. Milk				<b>,</b>				<b>,</b> -
Table 2.3.32. Current prices								
	3 4	5	6	7 8	9	10	11	12
t 1 2 3 price 3 3 3	3 4	3.5	3 4	4 3	3	4	4	4
hypothesis $H_0: a = 3.4$ $n = 12, \bar{X} = 3.458$ $S =$	alternative	$H_1$	: <i>a</i> > 3.4	(	¢-			
$n = 12, \bar{X} = {}^{3.458}$ $s =$	$\frac{\max x_i - \min x_i}{4}$	<u>x<sub>i</sub></u> 0.25	α=0.0		b = 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{-a}{\sqrt{n}} =$	0.8083
Decision: It is fair		H <sub>0</sub> hypo	thesis					
Product 16. Milk								
Table 2.3.30. Prices named b	y the custome	er						
t 1 2 3 price 1 1 1	4	5 <u>6</u>	7	8	9	10	11	12
price 1 1 1	1	1 1.	.2 1.2	1	1	1	1.2	1.2
hypothesis $H_0: a= 1$								
$n = 12, \bar{X} = 1.067$ $S =$	$\frac{\max x_i - \min x_i}{4}$	<u>x<sub>i</sub></u> 0.05	α=0.0	5 t <sub>11;0,0</sub>	<sub>05</sub> = 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{-a}{\sqrt{n}} =$	4.6188
Decision: It is fair		H <sub>1</sub> hypo	thesis					
Product 17. Yoghurt           Table 2.3.33. Current prices           t         1         2         3           price         1.2         1.2         1.2	4 5	6	7	8	9	10	11	12
price 1.2 1.2 1.2	1.4 1.	4 1.2	1.2	1.2	1.2	1.2	1.4	1.4
hypothesis $H_0: a= 1$		_				-		
$n = 12, \bar{X} = 1.267$ $S =$	$\frac{\max x_i - \min}{4}$	<u>x<sub>i</sub></u> 0.05	α=0.0	5 t <sub>11;0,0</sub>	<sub>05</sub> = 2.7	$t = \frac{X}{s/s}$	$\frac{-a}{\sqrt{n}} =$	18.475
Decision: It is fair		H <sub>1</sub> hypo	thesis					
Product 17. Yoghurt								
Table 2.3.34. Prices named b	by the custome	er						
t 1 2 3	3 4	5	6	7 8	9	10	11	12
	5 0.5	0.4	6 7 0.4 0.4	4 0.5	0.5	0.4	0.5	0.4
ჰიპოთეზა <i>H</i> ი:a= 0.1								
$n = 12, \bar{X} = 0.458$ $S =$	$\frac{\max x_i - \min}{4}$	$\frac{x_i}{2} = 0.025$	5 α=0.05	5 t11.00	$_{15} = 2.7$	$t = \frac{\bar{X}}{\bar{X}}$	-a	49.652
	4			11,0,0		S/*	$\sqrt{n}$	49.032

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Produc	t 18.	Cheese										
		. Current	prices									
				4	5	6	7	8	9	10	11	12
price	8	8	8	9	9	10	9	8 10	10	10 10	9	10
hypothe	esis	<i>H</i> <sub>0</sub> :a=	8.2	alternati	ve	$H_1 : a$	>8.2					
n = 12	2, <del>X</del> =	<u> </u>	<i>s</i> =	$\frac{\max x_i - r}{4}$	$\frac{\min x_i}{2}$	0.5	α=0.05	t <sub>11;0,0</sub>	<sub>5</sub> = 2.7	$t = \frac{1}{s}$	$\frac{\bar{X}-a}{\sqrt{n}} =$	6.6973
Decisio	n: It is	s fair			$H_1$	hypothes	sis					
Produc	t 18.	Cheese										
Table 2.	3.36	. Prices n	amed b	by the cust	omer							
t	1	2	3	3 4	5	6	7	8	9	10	11	12
price	4	4	4	4 4	4.5	4.5	4	8	4	3.5	3	4
				alternativ max x <sub>i</sub> -r 4				t <sub>11;0,0</sub>	<sub>5</sub> = 2.7	$t = \frac{1}{s}$	$\frac{\bar{x}-a}{\sqrt{n}} =$	-0.3849
able 2.	3.37.	Cottage Current	prices									
t	1	2	3	4	5	6	7	8	9	10	11 4.5	12
nypothe	sis	<i>Н</i> о:а=	4	alternativ	/e	$H_1 : a$ 2	>4					
n = 12	2, <del>X</del> =	<sub>=</sub> 3.708	s =	$\max x_i - n$ 4	$\frac{1}{x_i}$	0.375	α=0.05	t <sub>11;0,0</sub>	<sub>5</sub> = 2.7	$t = \frac{1}{s}$	$\frac{x-a}{\sqrt{n}} =$	-2.6943
Decisior	n: It is	s fair			$H_0$	hypothes	is					
		Cottage										
Table 2.	3.38.	Prices n	amed b	y the cust								
t	1		3	4	5	6	7	8	9	10		12
price	. 1	-	1					1	1.2	1.2	1	1
				alternativ		$H_1 : a$					₹-a	
n = 12	2, <del>X</del> =	<sub>=</sub> 1.158	<i>s</i> =	$\frac{\max x_i - \max x_i}{4}$	$\frac{1}{x_i}$	0.125	α=0.05	t <sub>11;0,0</sub>	<sub>5</sub> = 2.7	$t = \frac{1}{s}$	$\frac{1}{\sqrt{n}}$	4.3879
Decisior	n: It is	s <mark>fai</mark> r			$H_1$	hypothes	is					

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				Р	rint ISSN	: 2053-4	043(Print			2053-405	
Product 20.	Sour Cre	am									
Table 2.3.39											
				5	6	7	8	9	10	11	12
t 1 price 2	2	2	2	2.2	2.2	2	2	2.5	2.5	2.5	12 2.5
	_	_	_			_	_				
nypothesis	<i>H</i> <sub>0</sub> : a=	: 2	alternat	ive	$H_1 : a$	<i>u</i> > 2					
$n = 12, \overline{X} =$	_ 2.2	<i>s</i> =	$\frac{\max x_i - 1}{4}$	$\min x_i$	0.125	α=0.05	t <sub>11;0,0</sub>	<sub>5</sub> = 2.7	<i>t</i> =	$\frac{\bar{X}-a}{s/\sqrt{n}}=$	5.5426
Decision: It i	s fair			$H_1$	hypothes	sis					
Product 20.	Sour Cre	am									
Table 2.3.40			by the cus	tomer							
			-		6	7	8	9	10	11	12
t 1 price 0.1	0.1	0.1	5 0.15	5 0.15	0.1	0.2	0.1	0.1	0.1	0.15	12 0.15
nypothesis	H <sub>0</sub> :a=	0.1	alternat	ive	$H_1:a$	> 0.1					
										Ū.	
$n = 12, \overline{X} =$	<u> </u>	<i>s</i> =	$\frac{\max x_i - x_i}{4}$	min x <sub>i</sub> _	0.025	α=0.05	t <sub>11;0,0</sub>	<sub>5</sub> = 2.7	t =	$\frac{x-a}{s/\sqrt{n}}$ =	4.0415
Decision: It i	s fair			$H_1$	hypothes	sis					
<b>Product 21.</b> Table 2.3.41. t 1	. Current			5	6	7	8	9	10	11	12
t 1 price 0.3	0.3	0.3	0.2	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3
hypothesis $n=12, ar{X}=$ Decision: It is	<u> </u>			min <i>x<sub>i</sub></i>		α=0.05	t <sub>11;0,0</sub>	<sub>5</sub> = 2.7	t =	$\frac{\bar{X}-a}{s/\sqrt{n}}=$	15.011
				-							
Product 21.											
Table 2.3.42			-								
t 1	. 2	3	3 4	l 5	6	7	8 0.1	9	10	11	12
price 0.1	0.1	0.1	5 0.15	6 0.15	0.1	0.2	0.1	0.1	0.1	0.15	0.15
hypothesis	<i>H</i> <sub>0</sub> : a=	0.06	alternat	ive	$H_1 : d$	i > 1					
$n = 12, \overline{X} =$	_ 0.129	<i>s</i> =	$\frac{\max x_i - 1}{4}$	min x <sub>i</sub> _	0.025	α=0.05	t <sub>11;0,0</sub>	<sub>5</sub> = 2.7	<i>t</i> =	$\frac{\bar{X}-a}{s/\sqrt{n}}=$	9.584
Decision: It i					hypothes						

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Product 22. Butter		112000 100	1(Onlin
Table 2.3.43. Current prices			
	10	11	12
t         1         2         3         4         5         6         7         8         9           price         5         5         6         5         5         5         6         5         5	6	6.5	6
hypothesis $H_0: a=5$ alternative $H_1: a>5$			
$n = 12, \bar{X} = 5.625$ $S = \frac{\max x_i - \min x_i}{4} = 0.375$ $\alpha = 0.05$ $t_{11;0,05} = 2.5$	7 t	$=\frac{\bar{X}-a}{s/\sqrt{n}}=$	5.773
Decision: It is fair $H_1$ hypothesis			
<b>Product 22. Butter</b> Table 2.3.44. Prices named by the customer			
t 1 2 3 4 5 6 7 8 9 price 3 3 3 4 4 3 3 3 3	10	11	12
price 3 3 3 4 4 3 3 3 3	4	3	3
hypothesis $H_0: a= 3.2$ alternative $H_1: a > 3.2$			
$n = 12, \bar{X} = 3.25$ $S = \frac{\max x_i - \min x_i}{4} = 0.25$ $\alpha = 0.05$ $t_{11;0,05} = 2.5$	7 t	$=\frac{\bar{X}-a}{s/\sqrt{n}}=$	0.6928
Decision: It is fair $H_0$ hypothesis			
Product 23. Vegetable Oil			
t 1 2 3 4 5 6 7 8 9	10	11	12
t         1         2         3         4         5         6         7         8         9           price         3         3         3         3         3.5         3.5         3         4	10 4	11 4	<u>12</u> 4
t       1       2       3       4       5       6       7       8       9         price       3       3       3       3       3.5       3.5       3       4         hypothesis $H_0: a=$ 3       alternative $H_1: a > 3$ $H_1: a > 3$	·	·	4
t         1         2         3         4         5         6         7         8         9           price         3         3         3         3         3.5         3.5         3         4	·	·	4
$\frac{t}{price} \frac{1}{3} \frac{2}{3} \frac{3}{3} \frac{4}{3} \frac{5}{3} \frac{6}{3} \frac{7}{8} \frac{8}{9}$ price 3 3 3 3 3 3 3.5 3.5 3 4 hypothesis $H_0: a= 3$ alternative $H_1: a > 3$ $n = 12, \bar{X} = 3.417  S = \frac{\max x_i - \min x_i}{4}  0.25  \alpha = 0.05  t_{11;0,05} = 2.7$	·	·	4
hypothesis $H_0: a=3$ alternative $H_1: a > 3$ $n = 12, \bar{X} = 3.417$ $S = \frac{\max x_i - \min x_i}{4}$ 0.25 $\alpha = 0.05$ $t_{11;0.05} = 2.7$	·	·	4
t       1       2       3       4       5       6       7       8       9         price       3       3       3       3       3       3.5       3.5       3       4         hypothesis $H_0: a=$ 3       alternative $H_1: a > 3$ $n = 12, \overline{X} = 3.417$ $S = \frac{\max x_i - \min x_i}{4}$ 0.25 $\alpha = 0.05$ $t_{11;0.05} = 2.7$ Decision: It is fair $H_1$ hypothesis       How       How       How       How         Product 23. Vegetable Oil       Table 2.3.46. Prices named by the customer       How       How	t t	$=\frac{\bar{X}-a}{s/\sqrt{n}}=$	4
t       1       2       3       4       5       6       7       8       9         price       3       3       3       3       3       3.5       3.5       3       4         hypothesis $H_0: a=$ 3       alternative $H_1: a > 3$ $n = 12, \overline{X} = 3.417$ $S = \frac{\max x_i - \min x_i}{4}$ 0.25 $\alpha = 0.05$ $t_{11;0.05} = 2.7$ Decision: It is fair $H_1$ hypothesis       Hold the customer       Hold the customer       Hold the customer	t t	$=\frac{\bar{X}-a}{s/\sqrt{n}}=$	4
t       1       2       3       4       5       6       7       8       9         price       3       3       3       3       3       3.5       3.5       3       4         hypothesis $H_0: a=$ 3       alternative $H_1: a > 3$ $H_1: a > 3$ $n = 12, \overline{X} = 3.417$ $S = \frac{\max x_i - \min x_i}{4}$ $0.25$ $\alpha = 0.05$ $t_{11;0,05} = 2.7$ Decision: It is fair $H_1$ hypothesis $H_1$ hypothesis $H_2$ $S = 1000000000000000000000000000000000000$	t t	$=\frac{\bar{X}-a}{s/\sqrt{n}}=$	4
t       1       2       3       4       5       6       7       8       9         price       3       3       3       3       3       3.5       3.5       3       4         hypothesis $H_0: a =$ 3       alternative $H_1: a > 3$ $n = 12, \overline{X} = 3.417$ $S = \frac{\max x_i - \min x_i}{4}$ $0.25$ $\alpha = 0.05$ $t_{11:0.05} = 2.7$ Decision: It is fair $H_1$ hypothesis $H_1$ hypothesis $H_2$ $3$ $4$ $5$ $6$ $7$ $8$ $9$ Product 23. Vegetable Oil       Table 2.3.46. Prices named by the customer $H_1$ $1$	t :	$=\frac{\bar{X}-\mathbf{a}}{s/\sqrt{n}}=$ $\frac{10 \qquad 11}{1 \qquad 1.5}$	4 5.7735 <u>12</u> 1.5
t       1       2       3       4       5       6       7       8       9         price       3       3       3       3       3       3.5       3.5       3       4         hypothesis $H_0: a =$ 3       alternative $H_1: a > 3$ $n = 12, \overline{X} = 3.417$ $s =$ $\frac{\max x_i - \min x_i}{4}$ 0.25 $\alpha = 0.05$ $t_{11:0.05} = 2.7$ Decision: It is fair $H_1$ hypothesis         Product 23. Vegetable Oil $H_1$ hypothesis         Table 2.3.46. Prices named by the customer $H_1$ $1.5$ $1.5$ $1$ $1$	t :	$=\frac{\bar{X}-\mathbf{a}}{s/\sqrt{n}}=$ $\frac{10 \qquad 11}{1 \qquad 1.5}$	4 5.7735 <u>12</u> 1.5

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Product 24. Aubergine														
Table 2	2.3.47.	Current	t prices											
t	1	2	3	4	5	6	7	8		9	10	11 4.5	12	
price	3.5	3.5	3.5	3.5	3.5	4	4	4		4	4	4.5	4.5	
hypoth	nesis	<i>H</i> <sub>0</sub> : a=	= 4	alternativ	e	$H_1$ :	a > 4							
n = 1	12, <i>X</i> =	<sub>=</sub> 3.875	$s = \frac{n}{s}$	nax x <sub>i</sub> -m 4	$\frac{\ln x_i}{2}$	0.25	α=0.05		t <sub>11;0,05</sub>	5 = 2.7	t =	$=\frac{\bar{X}-a}{s/\sqrt{n}}=$	-1.7321	
Decisio	$n = 12, \bar{X} = 3.875  S = \frac{\max x_i - \min x_i}{4} = 0.25  \alpha = 0.05  t_{11;0,05} = 2.7  t = \frac{\bar{X} - a}{s/\sqrt{n}} = -1.7321$ Decision: It is fair $H_0$ hypothesis													
Produ	ct 24. /	Aubergi	ne											
Table 2	2.3.48.	Prices r	named by	the custo	mer									
t	1	2	3	4	5	6	7		8	9	10	) 11	12	
price	1.5	1.5	1.5	1.5	1.5	1.5	2		2	2	2	11           2         1.5	1.5	
hypothesis $H_0: a= 1.7$ కర్రాతర్పతిగి $H_1: a > 1.7$ $n = 12, \overline{X} = 1.667$ $S = \frac{\max x_i - \min x_i}{4}$ 0.125 $\alpha$ =0.05 $t_{11;0,05} = 2.7$ $t = \frac{\overline{X} - a}{s/\sqrt{n}}$ = -0.9238														
Decisio	on: It is	fair			$H_0$	hypothe	sis							

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		]	Print ISSN	N: 2053-4	043(Print)	, Online	ISSN: 20	53-405	1(Online)
Product 25. Potato									
Table 2.3.49. Currer									
t 1 2 price 1.8 1.8	. 3	4	5 6	7	8	9	10	11	12
price 1.8 1.8	1.8	1.8 1.	.8 2	2	2	1.8	1.8	2	2
hypothesis $H_0$ : a							-		
$n = 12, \bar{X} = 1.883$	$s = \frac{\max}{s}$	$\frac{x_i - \min x_i}{4}$	0.05	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{x}{s/s}$	$\frac{-a}{\sqrt{n}} =$	12.702
Decision: It is fair		$H_{1}$	ı hypothe	sis					
Product 25. Potato Table 2.3.50. Prices		e customer							
t 1 2 price 1 1	. 3	4	56	7	8	9	10	11	12
price 1 1	. 1	1	1 0.8	0.8	0.8	1	1	0.8	0.8
hypothesis $H_0$ : a									
$n = 12, \bar{X} = 0.917$	$s = \frac{\max}{2}$	$\frac{x x_i - \min x_i}{4}$	<sub>=</sub> 0.05	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{-a}{\sqrt{n}} =$	1.1547
Decision: It is fair		$H_0$	hypothe	sis					
Product 26. Bean Table 2.3.51. Curren t 1 2		4	56	7	8	9	10	11	12
t 1 2 price 4 4	4	4	4 4.5	4.5	4.5	4	10 4	4.5	4.5
hypothesis $H_0$ : a							Ŧ	2	
$n = 12, \bar{X} = 4.208$	$s = \frac{\max}{s}$	$\frac{x x_i - \min x_i}{4}$	0.125	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{x}{s/\sqrt{s}}$	$\frac{-a}{\sqrt{n}}$ =	5.7735
Decision: It is fair		$H_1$	hypothe	sis					
Product 26. Bean									
Table 2.3.52. Prices			г с	7	0	0	10	11	10
t 1 2 price 1.5 1.5	<u> </u>	4	5 0 5 1	/	1	9	10	11	<u>12</u> 1.5
hypothesis $H_0$ : a					1	1	1.5	1.5	1.5
$n = 12, \bar{X} = 1.333$	$s = \frac{\max}{s}$	$\frac{x x_i - \min x_i}{4}$	0.125	<mark>α=0.05</mark>	t <sub>11;0,05</sub>	= 2.7	$t = \frac{\bar{X}}{s/\sqrt{s}}$	$\frac{-a}{\sqrt{n}} =$	9.2376
Decision: It is fair		$H_{1}$	hypothe	sis					

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Product 27. Sugar								
Table 2.3.53. Current prices		_						
t 1 2 3 4	5 6 1.4 1.5	7	8	9	10	11	12	
price 1.4 1.4 1.4 1.4	1.4 1.5	1.5	1.5	1.5	1.4	1.4	1.4	
hypothesis $H_0: a= 1$ alternative	$H_1:$	a > 1						
$n = 12, \bar{X} = 1.433$ $S = \frac{\max x_i - \min}{4}$	<u>x<sub>i</sub></u> 0.025	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{-a}{\sqrt{n}} =$	60.044	
Decision: It is fair	H <sub>1</sub> hypothe	sis						
Product 27. Sugar								
Table 2.3.54. Prices named by the custome	er							
t 1 2 3 4 price 0.8 0.8 0.8 0.8	5 6	7	8	9	10	11	12	
price 0.8 0.8 0.8 0.8	0.8 0.5	0.5	0.6	0.6	0.5	0.5	0.5	
hypothesis $H_0: a= 0.7$ alternative	$H_{1} : a$	u > 0.7						
$n = 12, \bar{X} = 0.642$ $S = \frac{\max x_i - \min}{4}$	<u>x<sub>i</sub></u> 0.075	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{-a}{\sqrt{n}} =$	-2.6943	
Decision: It is fair	$H_0$ hypothe							
Product 28. Wine Table 2.3.55. Current prices t 1 2 3 4	5 6	7	8	9	10	11	12	
t 1 2 3 4 price 7 7 7 7	8 8	, 8	8	10	10	8	8	
hypothesis $H_0: a=1$ alternative $n = 12, \overline{X} = \frac{8}{S} = \frac{\max x_i - \min}{4}$ Decision: It is fair		α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{\bar{x}}{s/v}$	$\frac{-a}{\sqrt{n}} =$	32.332	
Product 28. Wine	-							
Table 2.3.56. Prices named by the custome	er							
-		7	8	9	10	11	12	
t 1 2 3 4 price 3 3 3 2.5	3 2.5	2.5	3	3	2.5	2	2.5	
hypothesis $H_0$ : a= 2.8 alternative	$H_1$ :	a > 1						
$n = 12, \bar{X} = 2.708$ $S = \frac{\max x_i - \min x_i}{4}$	<u>xi</u> 0.25	<mark>α=0.05</mark>	t <sub>11;0,05</sub>	= 2.7	$t = \frac{\bar{X}}{s/v}$	$\frac{-a}{\sqrt{n}} =$	-1.2702	
Decision: It is fair	H <sub>0</sub> hypothe	sis						

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Product	29. Vo	dka										
Table 2.	3.57. C	urrent	prices									
t	1	2	3 8	4	5	6	7	8	9	10	11	12
price	8	8	8	9	10	10	10	9	8	9	10	9
			9.1 alt			-				_		
<i>n</i> = 12	$R, \overline{X} =$	9	$s = \frac{\max}{s}$	$\frac{x_i - \min}{4}$	$\frac{x_i}{x_i} = 0.$	5 (	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{X}{s/s}$	$\frac{-a}{\sqrt{n}} =$	-0.6928
Decisior	i: It is fa	air			H <sub>0</sub> hy	pothesis						
Product	29. Vo	dka										
			amed by th									
t	1	2	3	4	5	6	7	8	9	10	11	12
price	3	3	3	4	3	3	4	3	3	3	2	3
			3.2 alt									
n = 12	$R, \overline{X} = 3$	3.083	$s = \frac{\max}{2}$	$\frac{x_i - \min}{4}$	$\frac{\mathbf{x}_i}{\mathbf{x}_i} = 0.$	5 (	α=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{\bar{X}}{s/s}$	$\frac{-a}{\sqrt{n}} =$	-0.8083
Decisior	: It is fa	air			H <sub>0</sub> hy	pothesis						
Product Table 2.2	3.59. Ci	urrent p		4	5	6	7	8	9	10	11	12
price	4	4	3	3	3	3	2	2	2	2	3	3
hypothe	sis H	ſ₀:a=	3.2 alto $s = \frac{\max}{s}$	ernative	1	H <sub>1</sub> : a >	3.2					-1 963
n = 12	$x_{i}, x_{i} = 2$		<i>s</i> = —	4		, u	-0.05	ι <sub>11;0,05</sub>	= 2.7	$\iota = s/\sqrt{2}$	$\overline{n}^{-}$	1.505
Decision	: It is fa	air			H <sub>0</sub> hy	pothesis						
Product												
			med by the			c	7	0	0	10		10
t price	0.5	0.5	3 0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	<u> </u>
			0.2 alte									
n = 12	$x, \bar{X} = 0$	.458	$s = \frac{\max}{2}$	$\frac{x_i - \min}{4}$	$\frac{1}{x_i} = 0.0$	)25 α	e=0.05	t <sub>11;0,05</sub>	= 2.7	$t = \frac{\bar{x}}{s/\sqrt{s}}$	$\frac{a}{n} =$	35.796
Decision	: It is fa	air			H <sub>1</sub> hy	pothesis						

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