



# **UNIVERSIDAD DEL SURESTE**

**LICENCIATURA EN ADMINISTRACIÓN Y ESTRATEGIAS DE  
NEGOCIO.**

**CUARTO CUATRIMESTRE**

ASIGNATURA:  
**ESTADÍSTICA INFERENCIAL**

TRABAJO:  
**EJERCICIOS 1**

QUE PRESENTA:  
**PRISCILA ALEJANDRA LÓPEZ GÓMEZ**

DOCENTE:  
**JORGE ENRIQUE ALBORES AGUILAR**

FECHA DE ENTREGA: **24 DE SEPTIEMBRE DEL 2022**

# Datos no agrupados

## Actividad 1

23	25	23	23	32	28	26
20	20	24	27	30	25	25
19	30	25	30	20	20	30
30	25	28	24	35	34	32
23	20	20	26	34	19	31
20	24	20	28	30	18	20
24	25	23	30	20	20	25

18	20	23	24	25	28	30
19	20	23	25	25	30	31
19	20	23	25	26	30	32
20	20	23	25	26	30	32
20	20	24	25	27	30	34
20	20	24	25	28	30	34
20	20	24	25	28	30	35
<u>136</u>	<u>140</u>	<u>164</u>	<u>174</u>	<u>185</u>	<u>208</u>	<u>228</u>
						1,235

324	400	529	576	625	784	900
361	400	529	625	625	900	961
361	400	529	625	676	900	1,024
400	400	529	625	676	900	1,024
400	400	576	625	729	900	1,156
400	400	576	625	784	900	1,156
400	400	576	625	784	900	1,225
<u>2,646</u>	<u>2,800</u>	<u>3,844</u>	<u>4,326</u>	<u>4,899</u>	<u>6,184</u>	<u>7,446</u>

32,145

$$\sum F_i = 1,235$$

$$\sum F_i^2 = 32,145$$

$$n = 49$$

$$\bar{X} = \frac{\sum F_i}{n} = \frac{1235}{49} = \underline{25.20}$$

$$Me = \frac{n+1}{2} \text{ impar}$$

$$\frac{n+1}{2} = \frac{49+1}{2} = \underline{25}, \text{ Mediana}$$

$$\text{Modo} = \underline{20}$$

$$S^2 = \frac{\sum F_i^2 - \frac{(\sum F_i)^2}{n}}{n-1} = \frac{32,145 - \frac{(1235)^2}{49}}{48} = \underline{21.20}$$

$$\sqrt{21.20} = \underline{4.60}$$

## Actividad 2

23	26	28	32	20	30
20	20	30	30	30	30
25	33	33	20	20	30
30	30	30	24	30	20
28	20	20	26	32	20

20	20	24	28	30	30	
20	20	25	30	30	32	
20	20	26	30	30	32	
20	20	26	30	30	33	
<u>20</u>	<u>23</u>	<u>28</u>	<u>30</u>	<u>30</u>	<u>33</u>	
100	103	129	148	150	160	790

400	400	576	784	900	900	
400	400	625	900	900	1024	
400	400	676	900	900	1024	
400	400	676	900	900	1089	
<u>400</u>	<u>529</u>	<u>784</u>	<u>900</u>	<u>900</u>	<u>1089</u>	
2,000	2,129	3,337	4,384	4,500	5,126	21,476

## Actividad 2

$$\sum f_i = 790$$

$$\sum f_i^2 = 21476$$

$$n = 30$$

$$\bar{x} = \frac{\sum f_i}{n} = \frac{790}{30} = \underline{26.33}$$

$$Me = \frac{n}{2}, \frac{n}{2} + 1 = \frac{30}{2}, \frac{30}{2} + 1$$

$$15, 16 + 28$$

$$\frac{28}{28}$$

$$56 \div 2 = \underline{28}$$

$$\text{Moda} = \underline{30}$$

$$S^2 = \frac{\sum f_i^2}{n-1} - \frac{(\sum f_i)^2}{n} = S^2 = \frac{21,476}{29} - \frac{(790)^2}{30} = \underline{23.19}$$

$$\sqrt{23.19} = \underline{4.81}$$

## Actividad 3

45	45	48	30	45	48
50	48	34	34	45	48
48	48	38	35	45	48
49	47	42	37	47	48
50	37	40	38	48	49
35	30	48	38	48	49
40	38	50	40	48	50
45	40	48	40	48	50
48	48	48	40	48	50
48	50	49	42	48	50
			374	470	490
					1,334

900	2025	2304	
1156	2025	2304	
1225	2025	2304	
1369	2209	2304	
1444	2304	2401	
1444	2304	2401	
1600	2304	2500	
1600	2304	2500	
1600	2304	2500	
1764	2304	2500	
14,102	22,108	24,018	60,228

### Actividad 3

$$\sum \bar{f}_i = 1,334$$

$$\sum \bar{f}_i^2 = 60,228$$

$$n = 30$$

$$\bar{x} = \frac{\sum \bar{f}_i}{n} = \frac{1,334}{30} = \underline{4.133}$$

$$Me = \frac{n}{2}, \frac{n}{2} + 1$$

$$15, 16 + \frac{48}{48}$$

$$96 \div 2 = \underline{48} \quad \Delta \quad \text{Mediana}$$

$$\text{Moda} = \underline{48} \quad \Delta$$

$$S^2 = \frac{\sum \bar{f}_i^2}{n-1} - \frac{(\sum \bar{f}_i)^2}{n} = \frac{60,228}{29} - \frac{(1,334)^2}{30} = \underline{31.36} \quad \Delta$$

$$\sqrt{31.36} = \underline{5.6} \quad \Delta$$