

**INSTITUTO PRIVADO**  
**RAFAEL AREVALO MARTINEZ**



**CURSO**  
**ESTADISTICA**

**CATEDRATICO**  
**JOSUE ESTRADA**

**NOMBRE**  
**ZABDY ANDREA APEN GARCIA**

**GRADO**  
**4TO ADMON**

**TAREA #2 DE ESTADISTICA**

# Act 2

**Instrucciones:** Calcule el rango y la desviación media y estándar de los siguientes datos en agrupar.

1. Importación de peras en millones de dólares

Año	Millones de Q	$ x - \bar{x} $	$(x - \bar{x})^2$
2011	12.97	1.03	1.061
2012	13.9	0.1	0.010
2013	14.67	0.67	0.449
2014	14.43	0.43	0.185
2015	14.05	0.05	0.003
		2.28	1.71

$$\bar{x} = \frac{\sum x}{N}$$

$$\bar{x} = \frac{70.02}{5} = 14.004$$

$$\bar{x} = 14$$

$$D.M. = \frac{\sum |x - \bar{x}|}{N}$$

$$D.M. = \frac{2.28}{5} = 0.46$$

$$12.97 - 14 = 1.03$$

$$13.9 - 14 = 0.1$$

$$14.67 - 14 = 0.67$$

$$14.43 - 14 = 0.43$$

$$14.05 - 14 = 0.05$$

$$D.M. = 0.46$$

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Tarea # 2



$$s = \sqrt{\frac{\sum (x - \bar{x})^2}{N}}$$

$$s = \sqrt{\frac{1.71}{5}}$$

$$s = \sqrt{0.34}$$

$$s = 0.58$$

$$R = D_{ma} - D_{me}$$

$$R = 14.67 - 12.97$$

$$R = 1.7$$

Zabdy Apin

Hto. Admon

Terdas #2

## 2. Proyección de crecimiento económico de un año (en porcentajes)

País	%	$ x - \bar{x} $	$(x - \bar{x})^2$
Guatemala	2.5	0.82	0.672
El Salvador	2.5	0.82	0.672
Honduras	3.1	0.22	0.048
Nicaragua	3	0.32	0.102
Costa Rica	3.4	0.08	0.006
Panamá	5.4	2.08	4.326
		4.34	5.826

$$\bar{X} = \frac{\sum x}{N} \quad \bar{X} = \frac{19.9}{6} = 3.32$$

$$D.M. = \frac{\sum |x - \bar{x}|}{N}$$

$$D.M. = \frac{4.34}{6} = 0.72$$

$$\begin{array}{rcl} 2.5 & - & 3.32 = 0.82 \\ 2.5 & - & 3.32 = 0.82 \\ 3.1 & - & 3.32 = 0.22 \\ 3 & - & 3.32 = 0.32 \\ 3.4 & - & 3.32 = 0.08 \\ 5.4 & - & 3.32 = 2.08 \end{array}$$

$$D.M. = 0.72$$

Zoraby Aprón

Hto. Admón

Tercer #2

$$S = \sqrt{\frac{\sum (x - \bar{x})^2}{N}}$$

$$S = \sqrt{\frac{5.82}{6}}$$

$$S = \sqrt{0.97}$$

$$S = 0.98$$

$$R = Dma - Dmb$$

$$R = 2.9$$

$$R = 5.4 - 2.5$$



3. Volumen de importancia de carne de pollo en libras de Estados a Guatemala en los siguientes años.

Año	libras	$1x - \bar{x}$	$(x - \bar{x})^2$
2011	162812	64104.83	4109,429,229
2012	186978	39938.83	1,595,110,142
2013	195335	31581.83	997,411,986,10
2014	242487	15570.17	242,430,193.82
2015	277390	50473.17	2,547,540,890
2016	296499	69582.17	4,841,678,382
	1361501	271,251	14,333,600,822.92

$$\bar{X} = \frac{\sum x}{N} \quad \bar{X} = \frac{1361501}{6} = 226,916.83$$

$$162812 - 226,916.83 = 64,104.83$$

$$186978 - 226,916.83 = 39,938.83$$

$$195335 - 226,916.83 = 31,581.83$$

$$242487 - 226,916.83 = 15,570.17$$

$$277390 - 226,916.83 = 50,473.17$$

$$296499 - 226,916.83 = 69,582.17$$

$$DM = \frac{271,251}{6} = 45,208.5$$

Zabdy  
Apón  
Ho. Admón

$$S = \sqrt{\frac{\sum (x - \bar{x})^2}{N}}$$

$$S = \sqrt{\frac{14333600822.92}{6}}$$

$$S = \sqrt{2,388,933,470.49}$$

$$S = 48,876.72$$

Tarea  
#2

$$R = R_{ma} - R_{mc}$$

$$R = 133,687$$

$$R = 296,499 - 162,812$$