

EXAMEN ESTADISTICA

35, 36, 36, 36, 37, 37, 38, 38, 38, 38, 39, 39, 39, 39
40, 40, 40, 40, 40, 40, 41, 41, 41, 41, 41, 42, 42, 43, 43
44, 44, 45, 46, 46, 47, 48, 49, 50, 51, 53

1. Cuantiles

$$Q_2 = 50\% = \frac{40}{2} \Rightarrow 20^{\#} \Rightarrow \underline{40/}$$

$$Q_8 = 80\% = 80(0.4) = 32^{\#} \Rightarrow \underline{44/}$$

$$P_{35} = 35\% = 35(0.4) \Rightarrow 14^{\#} \Rightarrow \underline{39/}$$

2. Construcción de tabla

$$R^2 = X_{\max} - X_{\min}$$

$$R = \underline{18/}$$

$$k = 1 + 3.322 \log(40)$$

$$k = \underline{6.32 = 7}$$

$$a = R/k$$

$$a = \underline{2.58 = 3}$$

3. - Tabla de Frecuencias

Clase	X_i	f_i	F_i	F_r	%	$X_i \cdot f_i$	$f_i (x_i - \bar{x})^2$
35-38	36.5	6	6	0.15	15%	219	184.815
38-41	39.5	14	20	0.50	35%	553	91.035
41-44	42.5	9	29	0.725	22.5%	382.5	54.02
44-47	45.5	5	34	0.85	12.5%	227.5	59.51
47-50	48.5	3	37	0.925	7.5%	145.5	124.80
50-53	51.5	3	40	1.0	7.5%	154.5	267.90

4. - Medidas de Tendencia

$$\bar{X} = \frac{1682}{40} \Rightarrow 42.05$$

$$M_c = 50\% = 40$$

$$M_o = 40$$

5. - Varianza

$$S^2 = \frac{782.08}{40} = 19.57$$

$$S = \sqrt{19.57} = 4.4$$