

Probabilidad y E. 3er p.

Ejercicios

100/11/25

BACK 2 SCHOOL

Datos {2, 3, 4, 5, 6}

$$w = 4$$

$$\sigma^2 = \frac{12}{19}$$

$$\sigma = 1.15$$

Fórmula de Densidad de Probabilidad

$$f(x) = \frac{1}{\sigma\sqrt{2\pi}} \exp\left(-\frac{(x-\mu)^2}{2\sigma^2}\right)$$

Se usan datos sin que se repita.

$$x = 2$$

$$f(2) = \frac{1}{1.15\sqrt{2\pi}} \exp\left(-\frac{(2-4)^2}{2(1.15)^2}\right) \approx 0.12$$

Ejercicio. Generar distribución normal para:

{1, 2, 2, 3, 3, 3, 4, 4, 4, 5}

$$\text{Media} = 3 \text{ o } \bar{x}$$

$$\text{Mediana} = 3$$

$$\text{Moda} = 3$$

$$\bar{x} = 3$$

$$\sqrt{\frac{D}{n}} = 2.50$$

BACH
SCHO

		$x_i - \bar{x}$	$(x_i - \bar{x})^2$
1	1	-2	4
2	2	-1	1
3	2	-1	1
4	3	0	0
5	3	0	0
6	3	0	0
7	4	1	1
8	4	1	1
9	5	2	4
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$$\sigma^2 = \frac{12}{9} \quad \sigma = 1.15$$

$$f(1) = \frac{1}{1.15 \sqrt{2\pi}} \left[\exp \left(-\frac{(1-3)^2}{2(1.33)} \right) \right]$$

$$\approx 0.348 \quad e^x \quad 1.5 \times \frac{4}{2.66}$$

$$0.078 \quad 0.22 \quad e^x \quad \frac{1}{2.66}$$

$$f(2) = 0.348 \cdot (0.69)$$

$$f(2) = 0.24$$

$$f(3) = 0.348 \cdot (1)$$

$$f(4) = 0.348 \cdot (0.69)$$

$$f(4) = 0.24$$

$$f(5) = 0.078$$

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