

Esempi di istogrammi con Kaleidograph (parte 2)

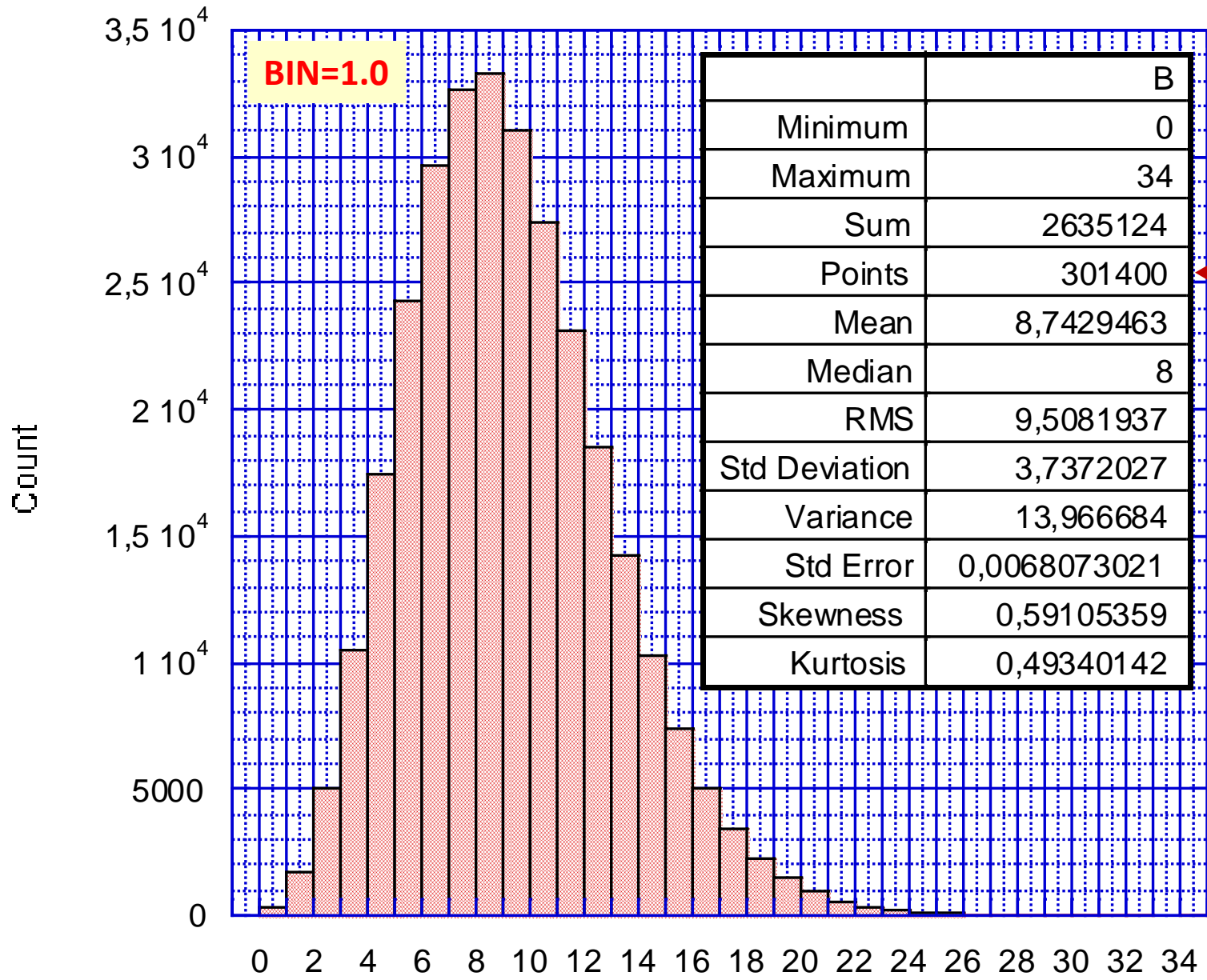
$$n = 301400 \quad \text{Bin} = 1.0$$

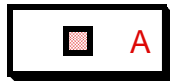
$$n = 1000 \quad \text{Bin} = 2.0$$

20 sottocampioni
ciascuno da 1000

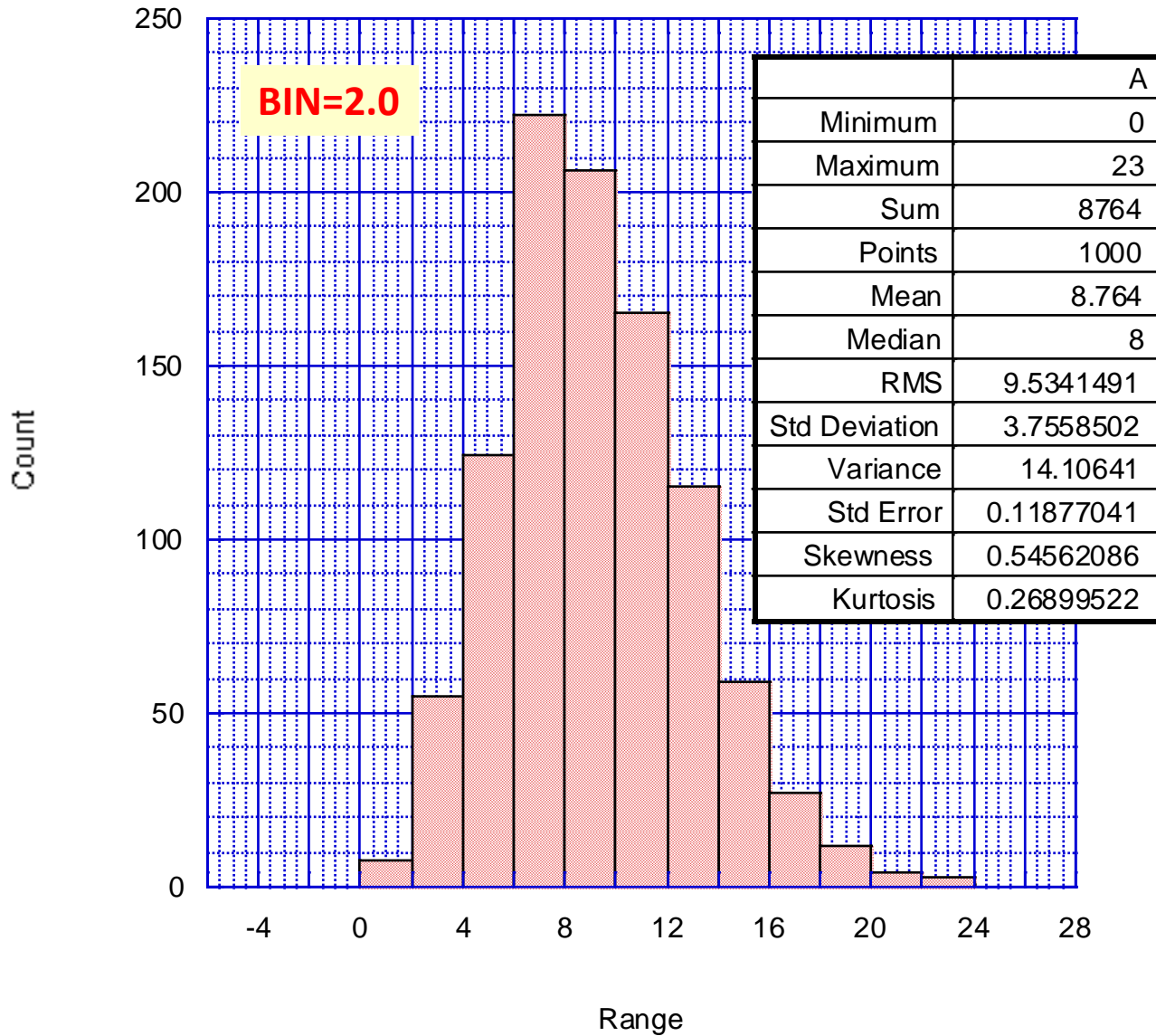
$$n = 20 \text{ medie} \quad \text{Bin} = \cancel{2.0} \quad 0.15$$

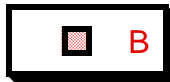
mppc2



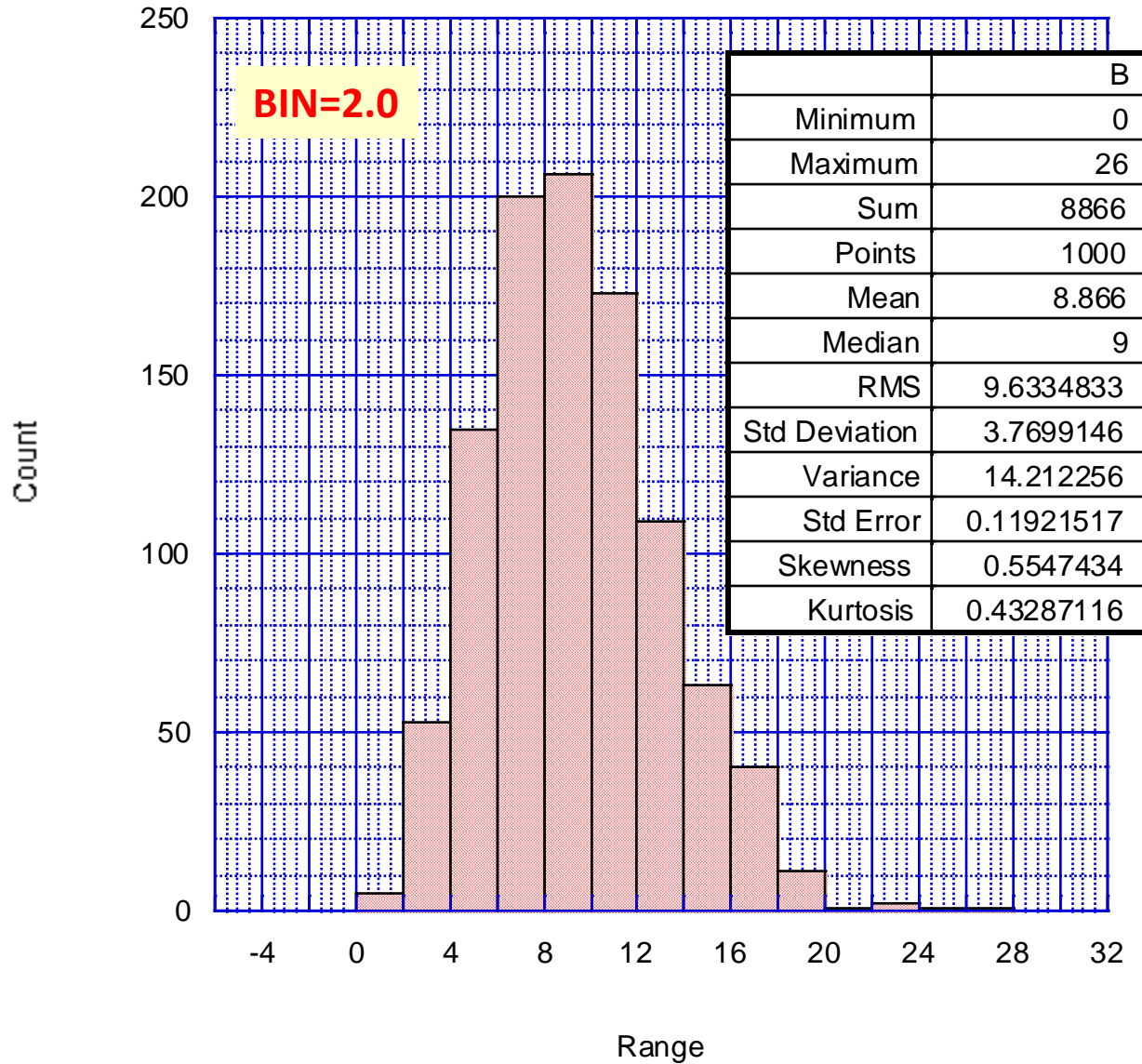


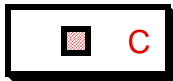
Data 19



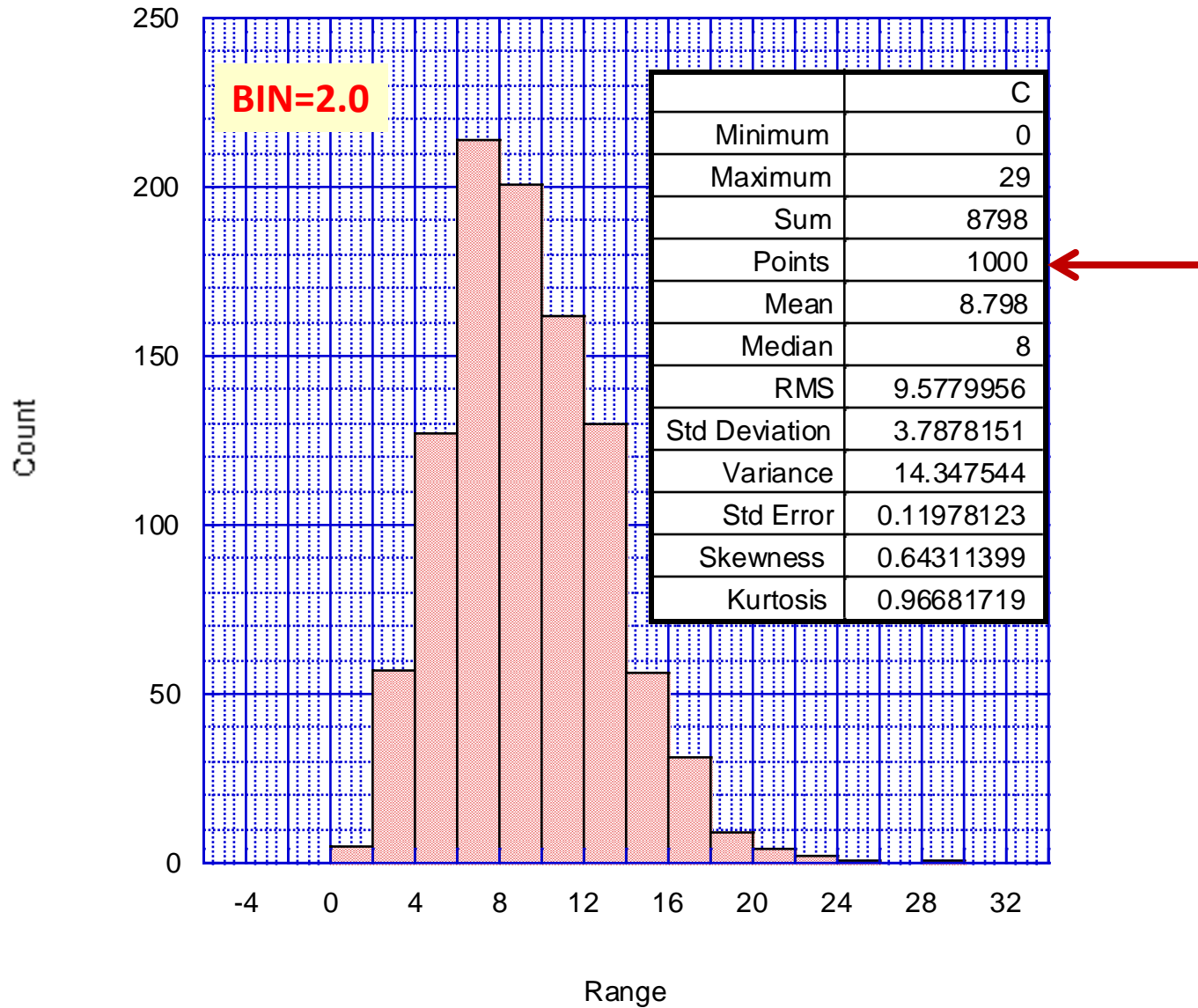


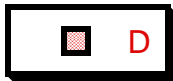
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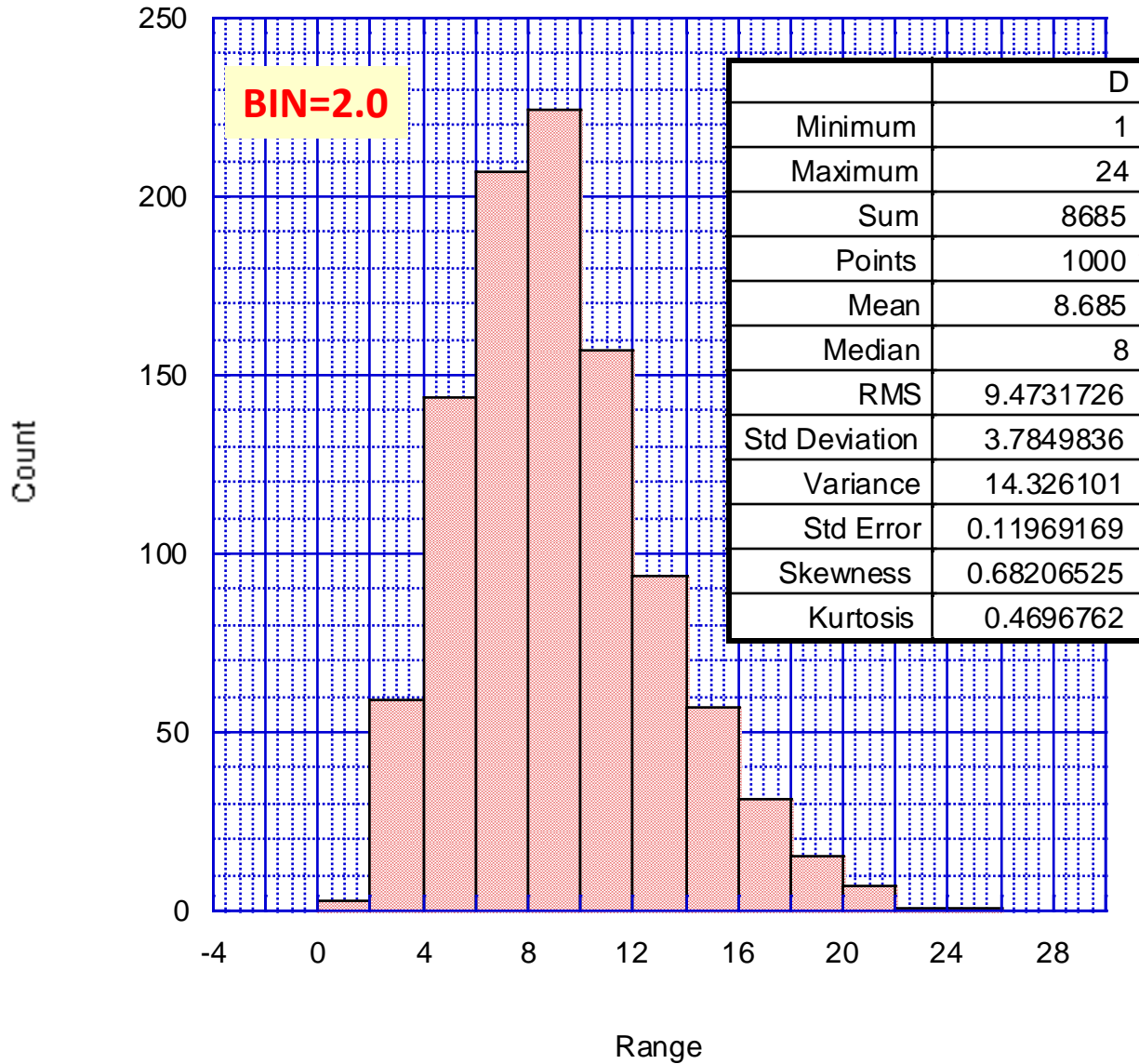


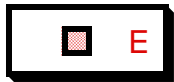
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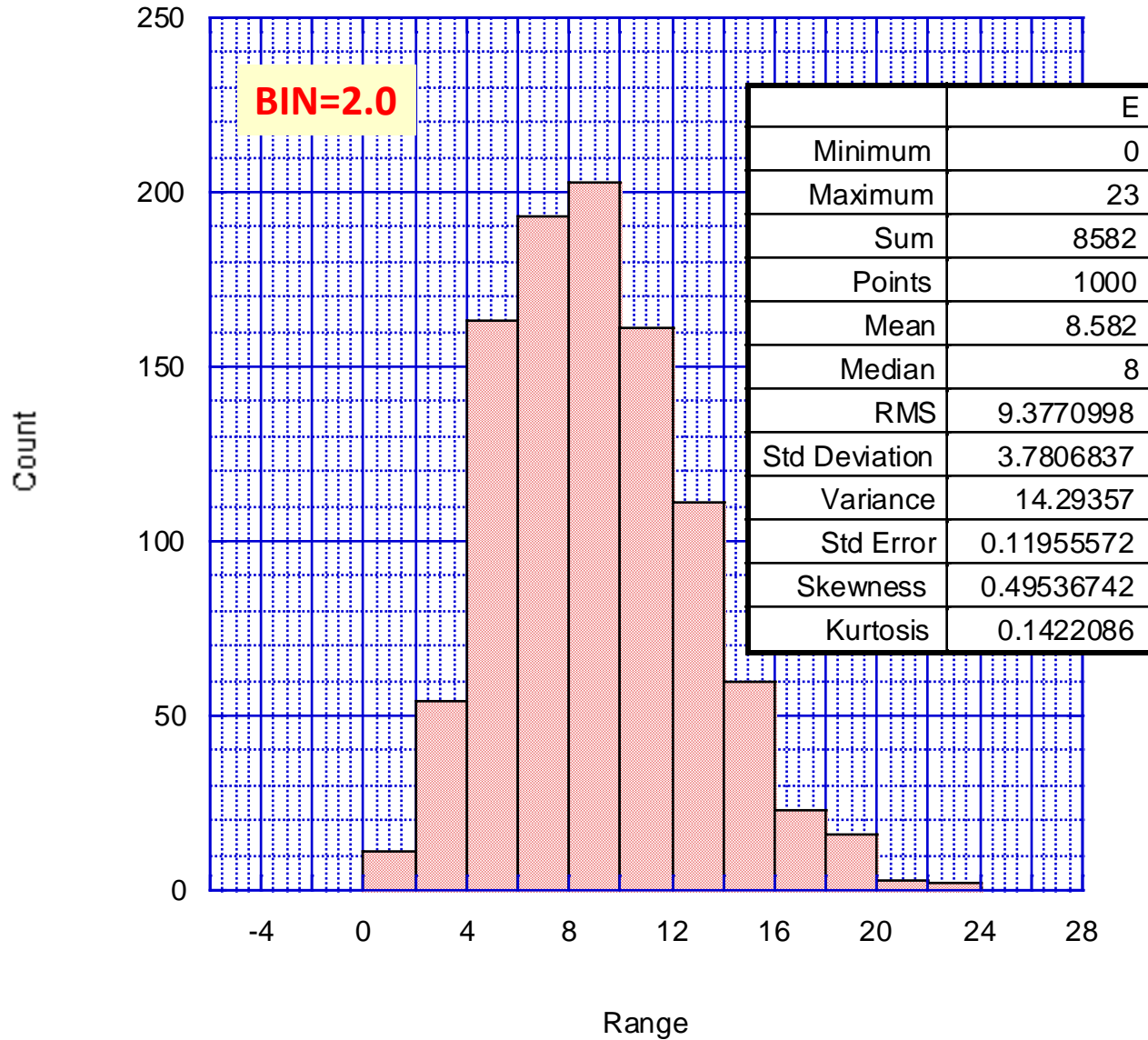


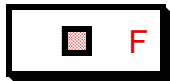
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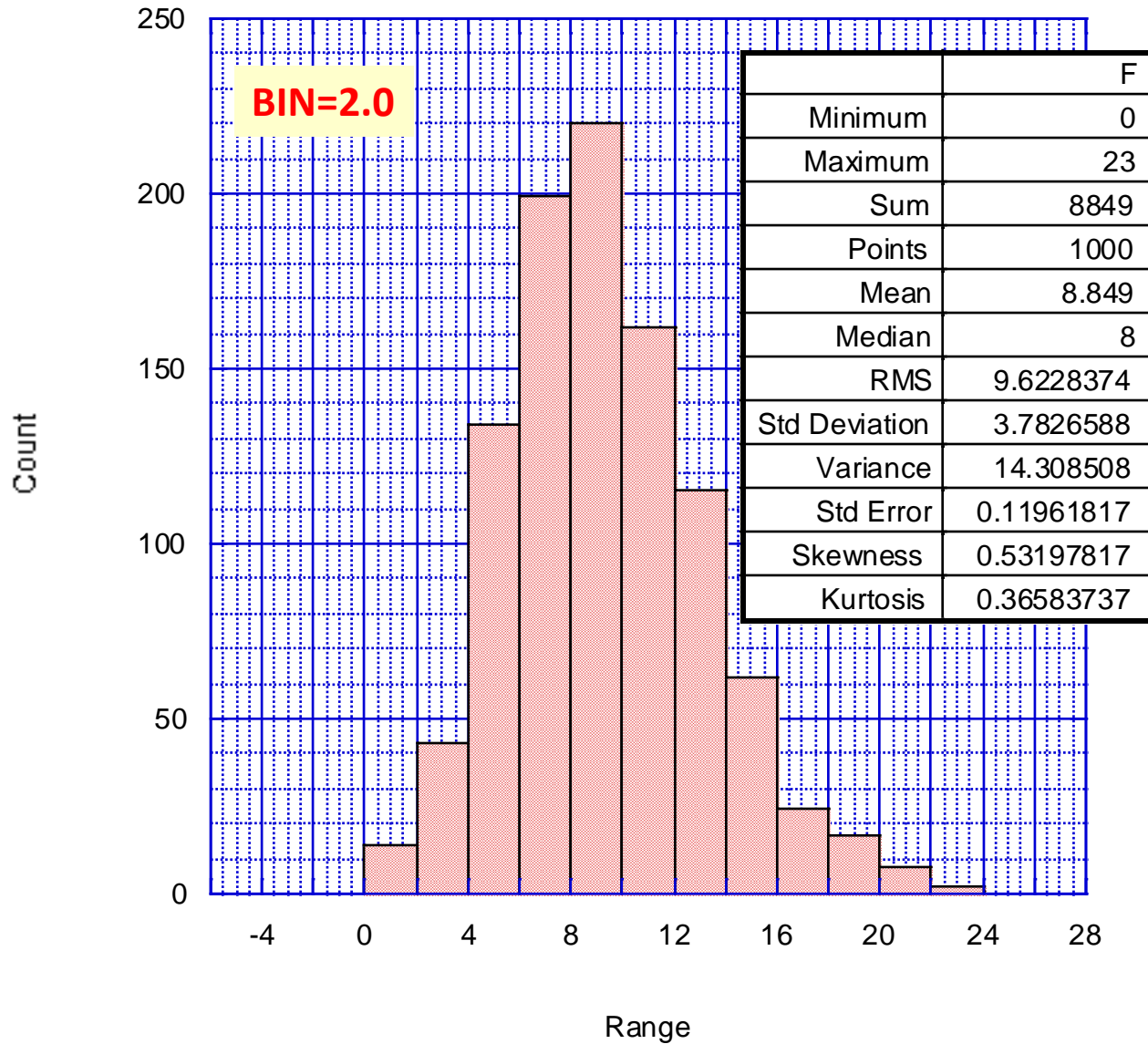


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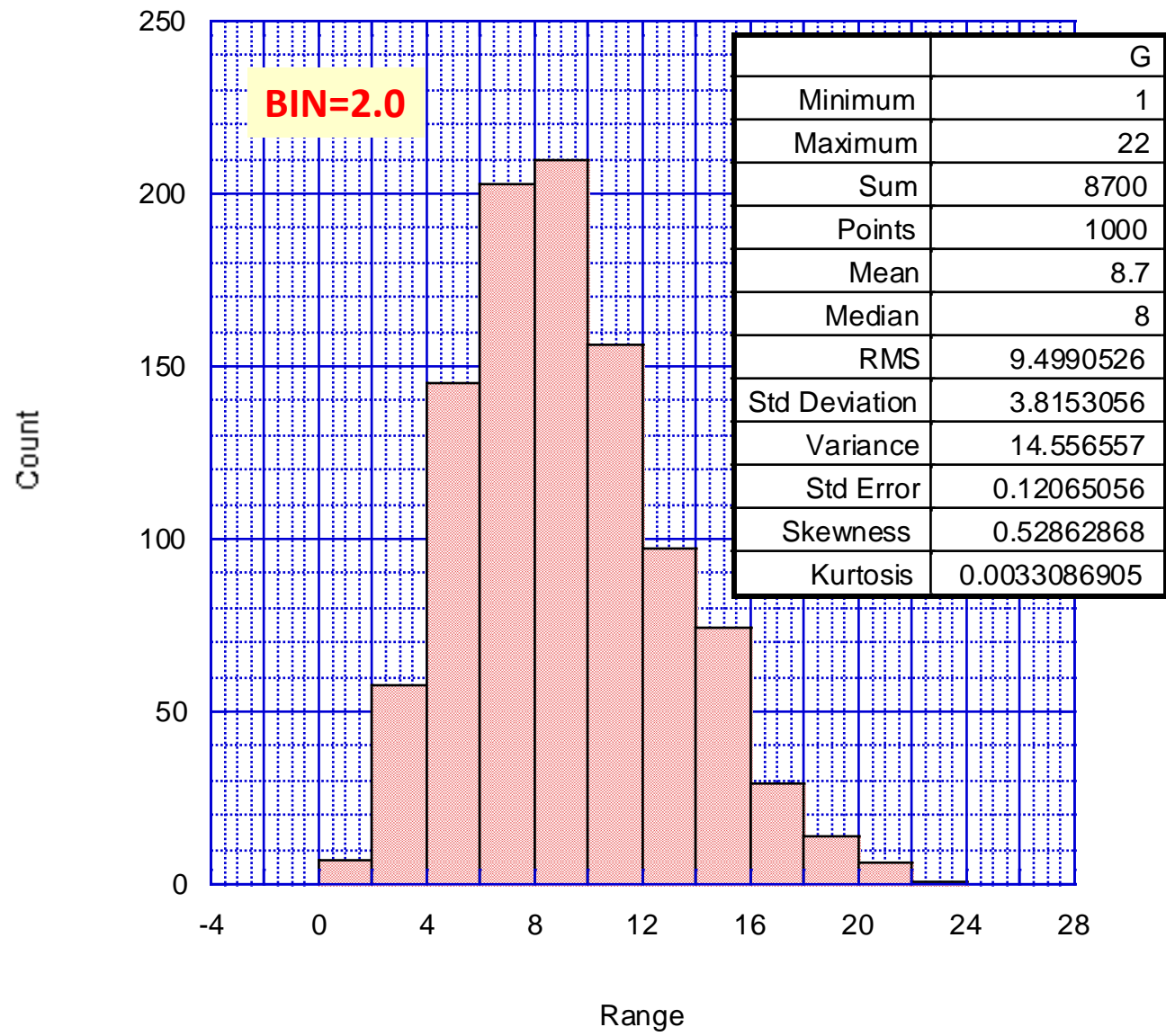


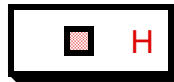
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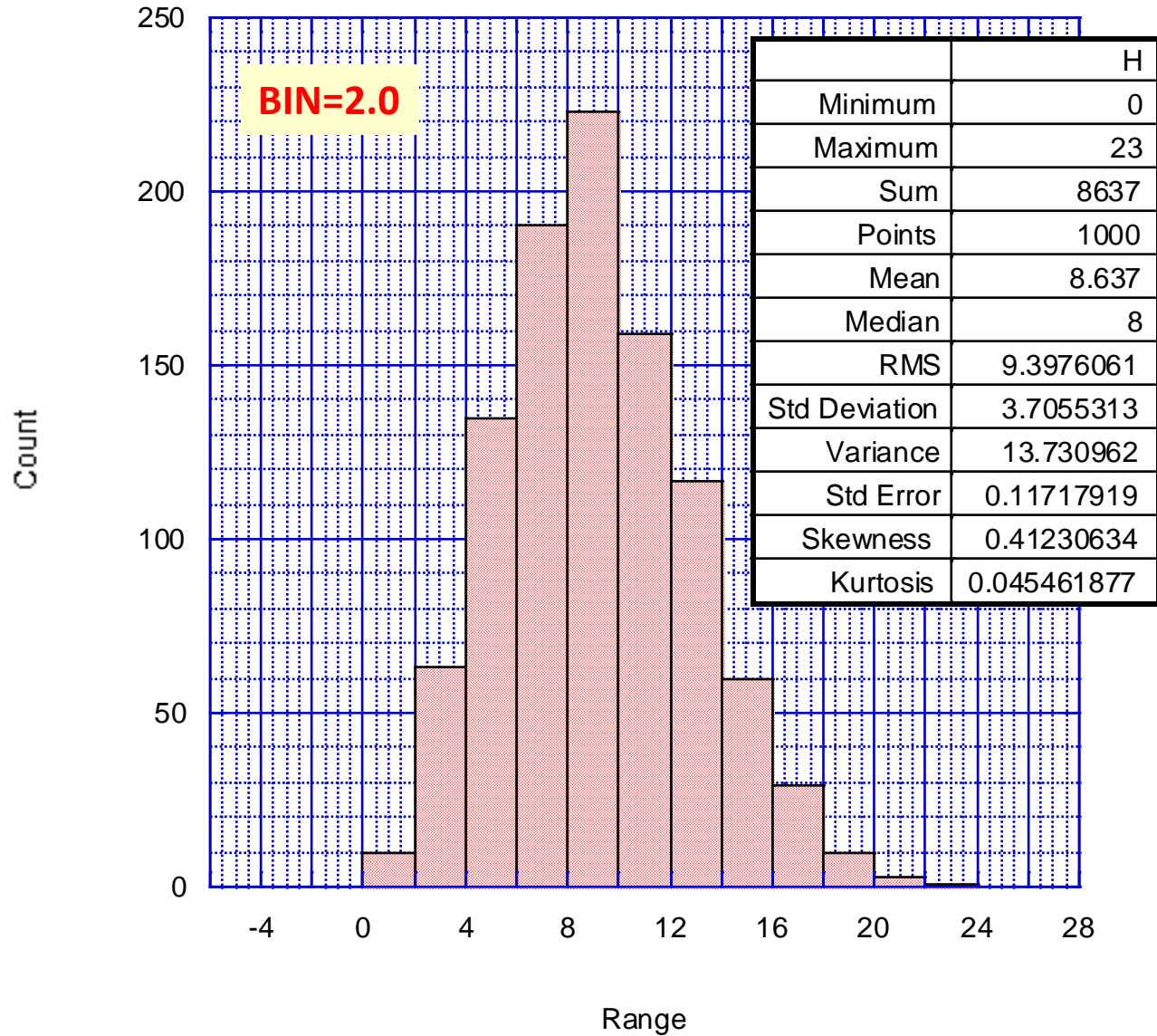


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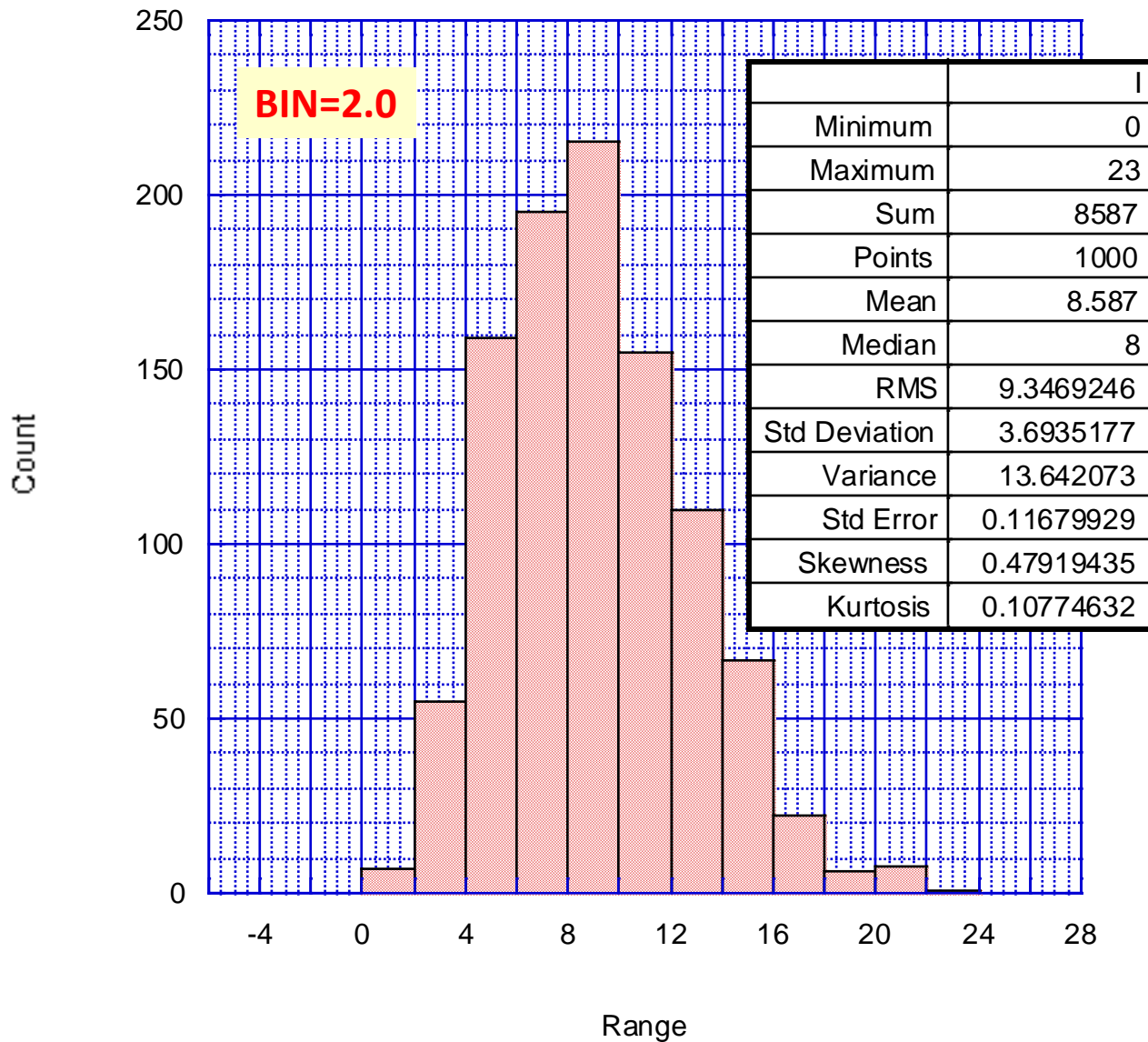


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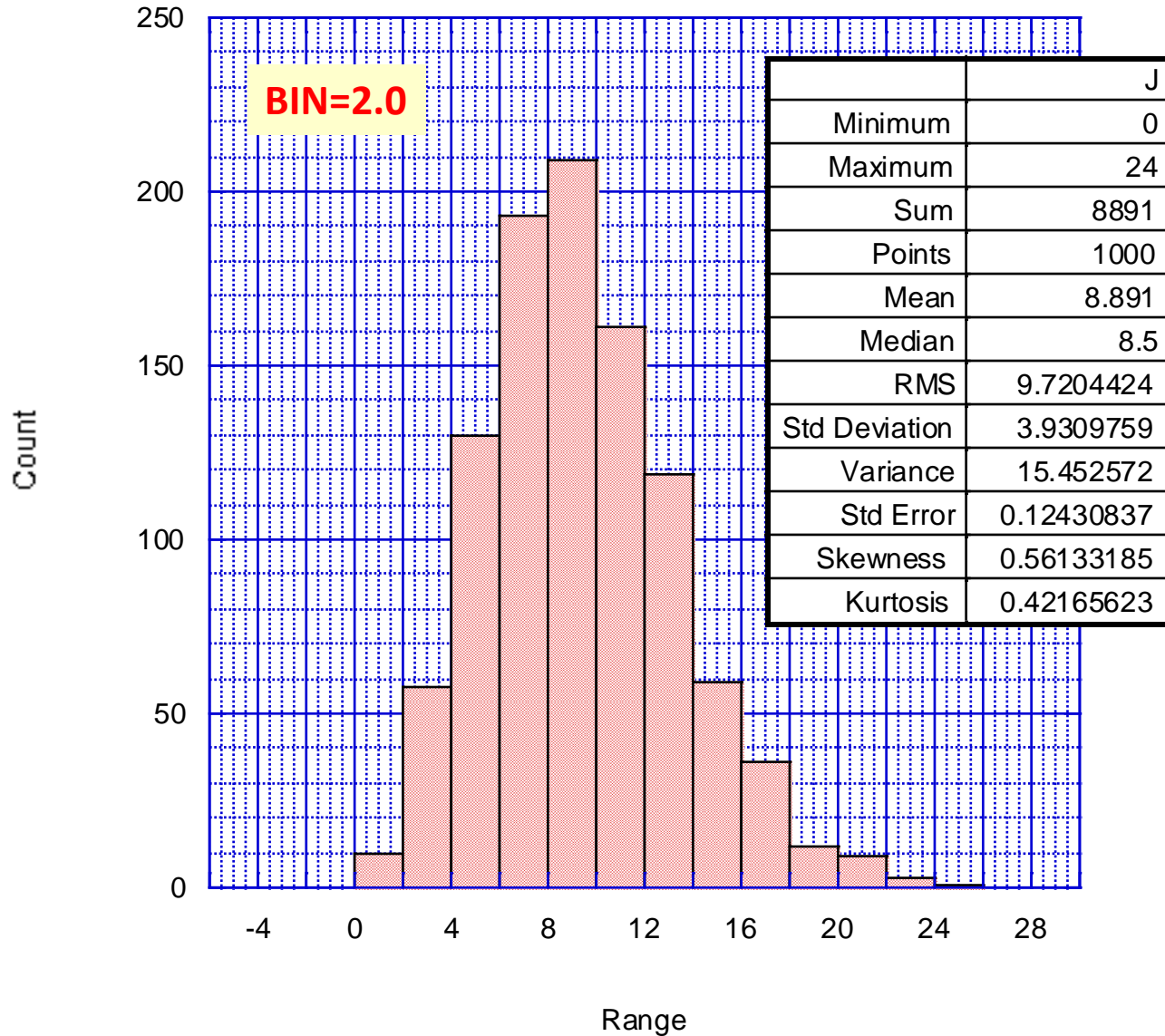


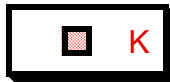
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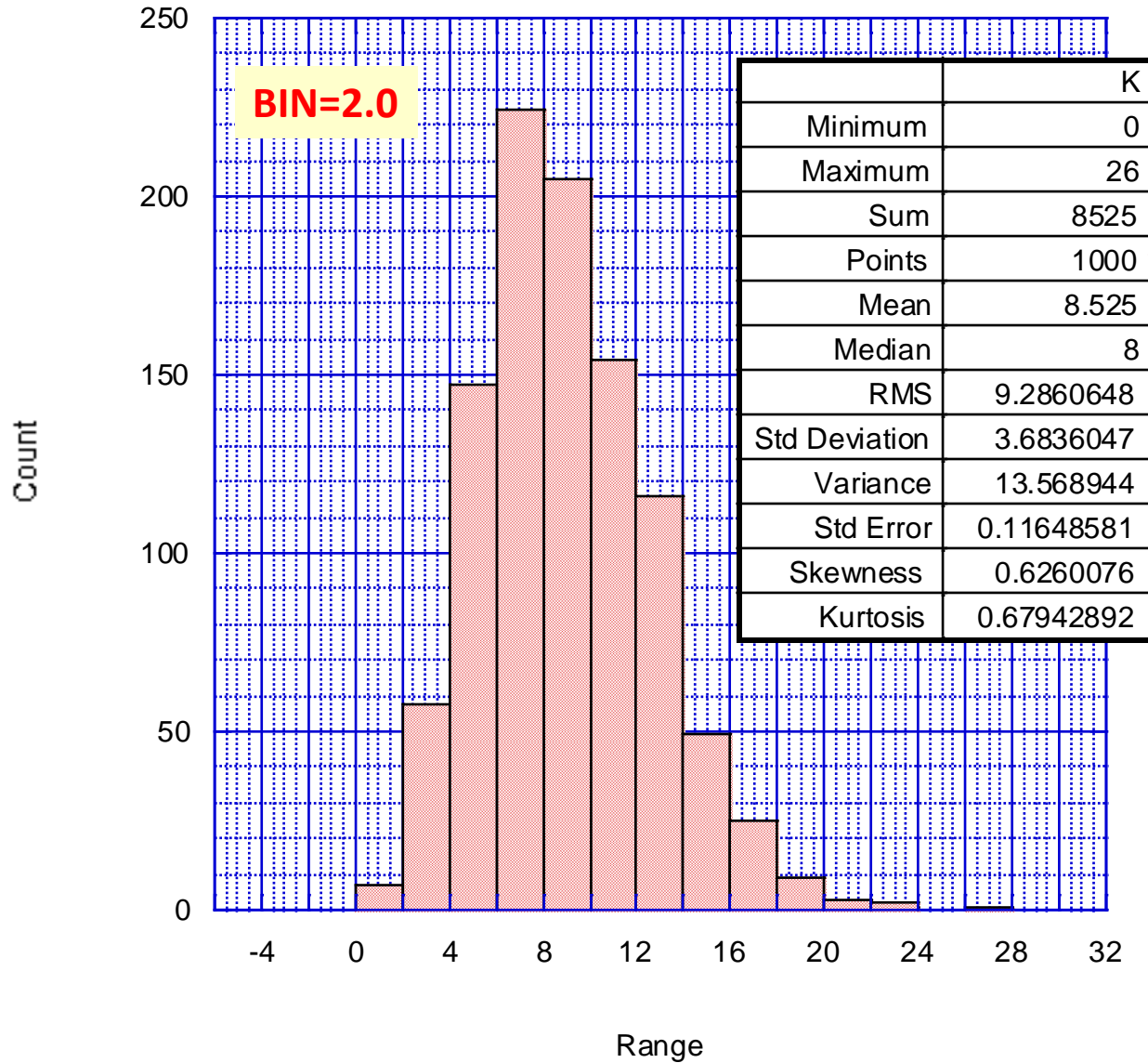


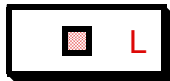
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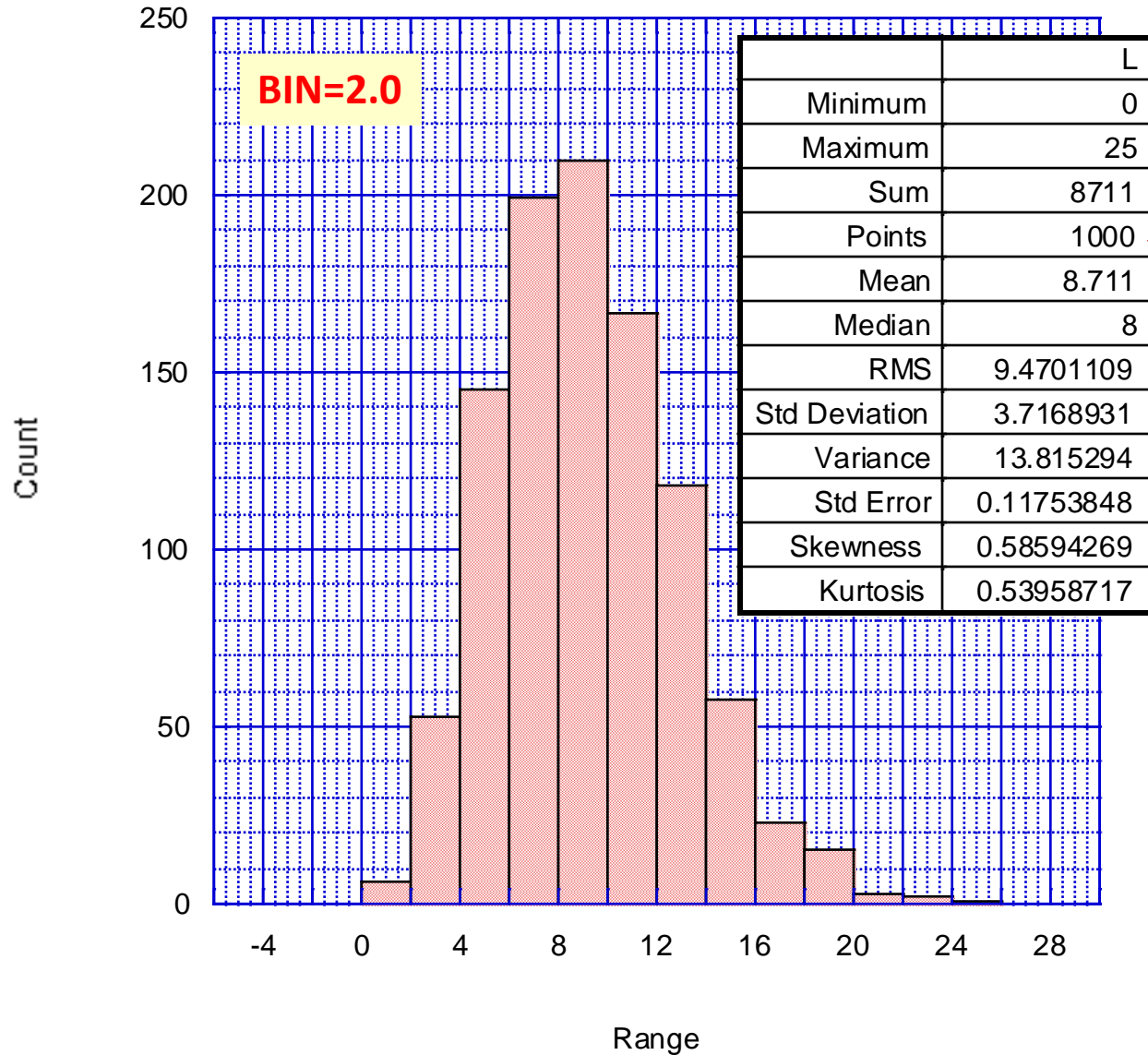


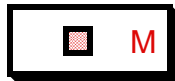
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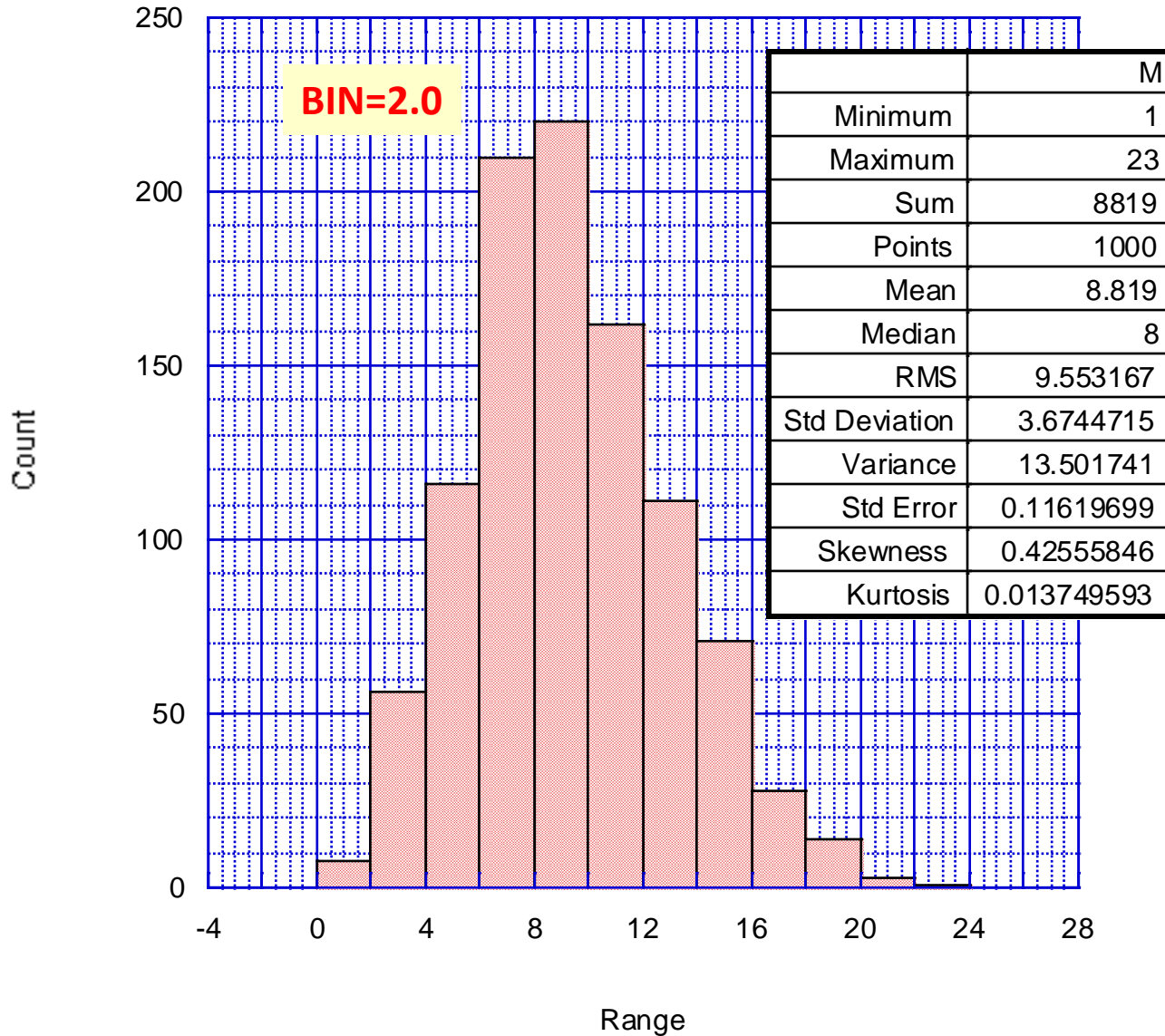


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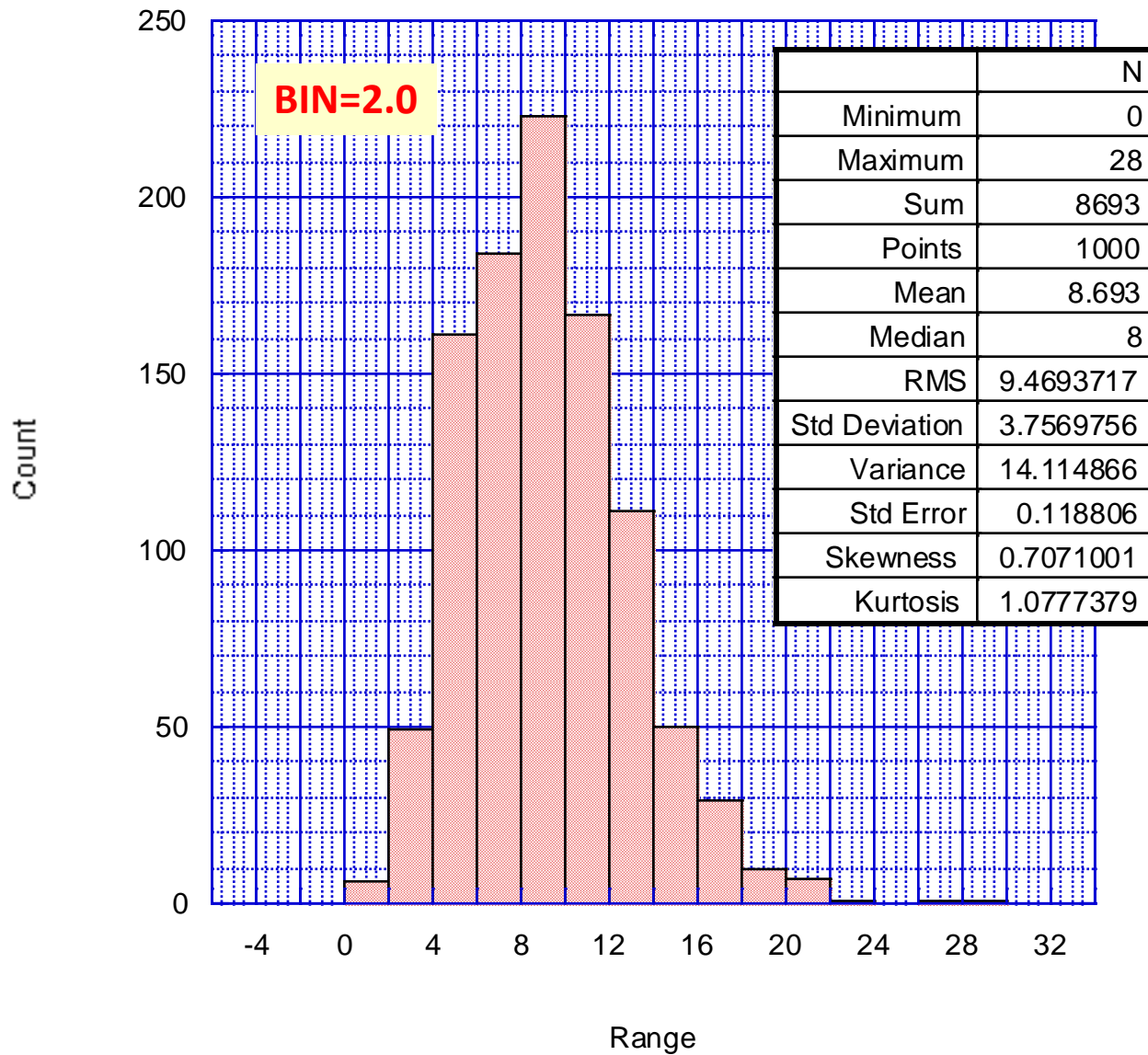


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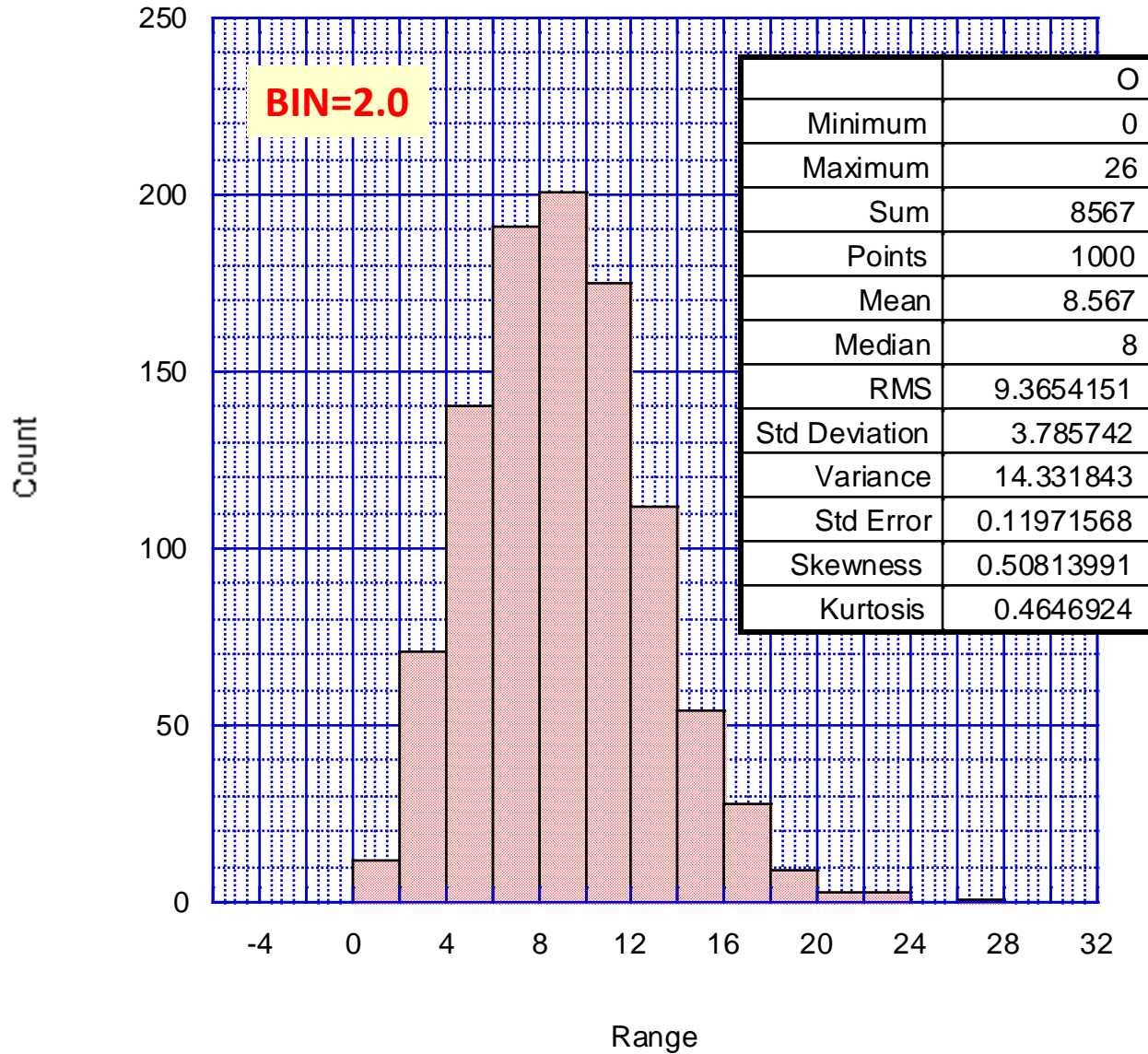
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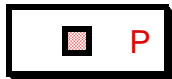
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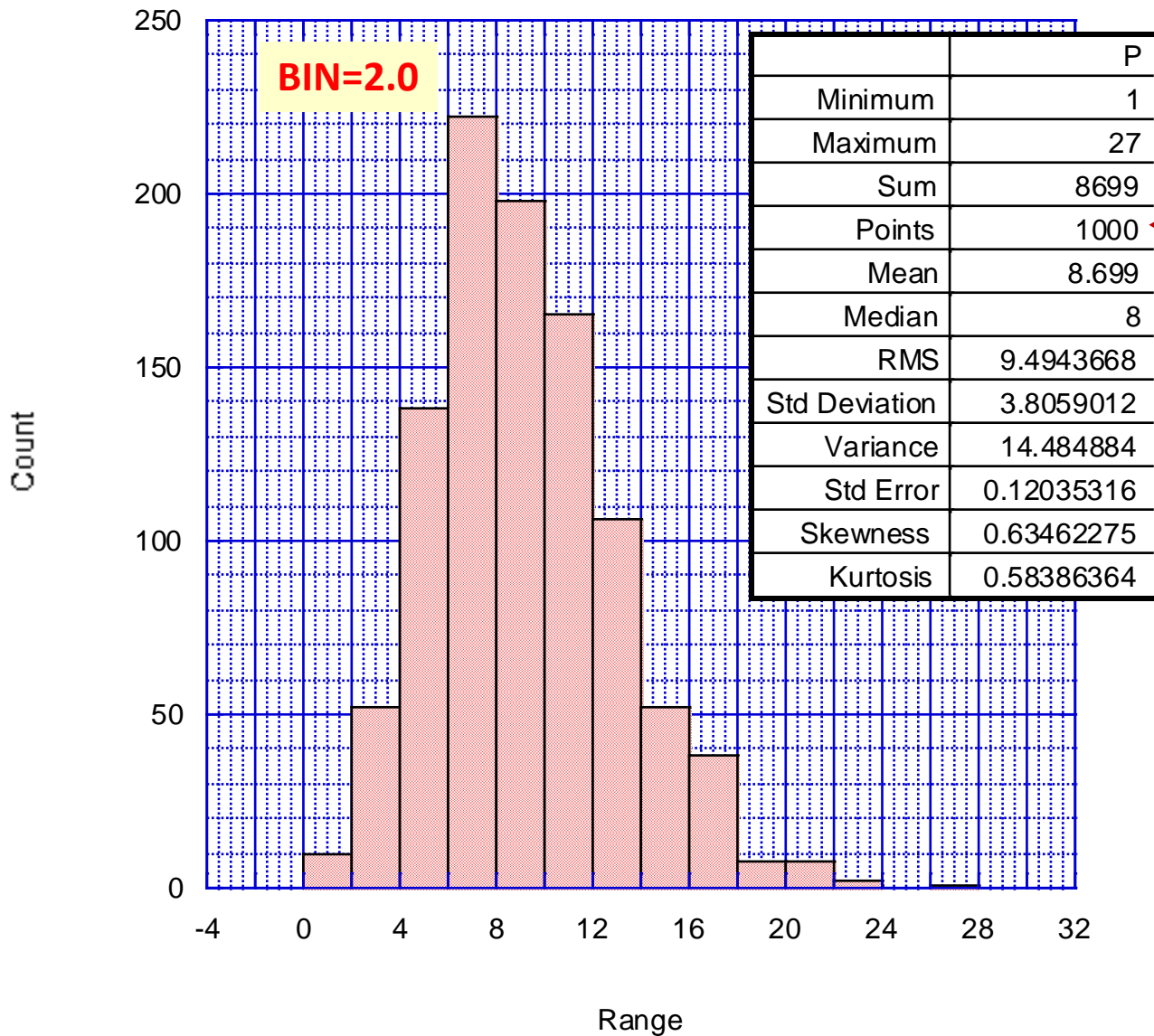


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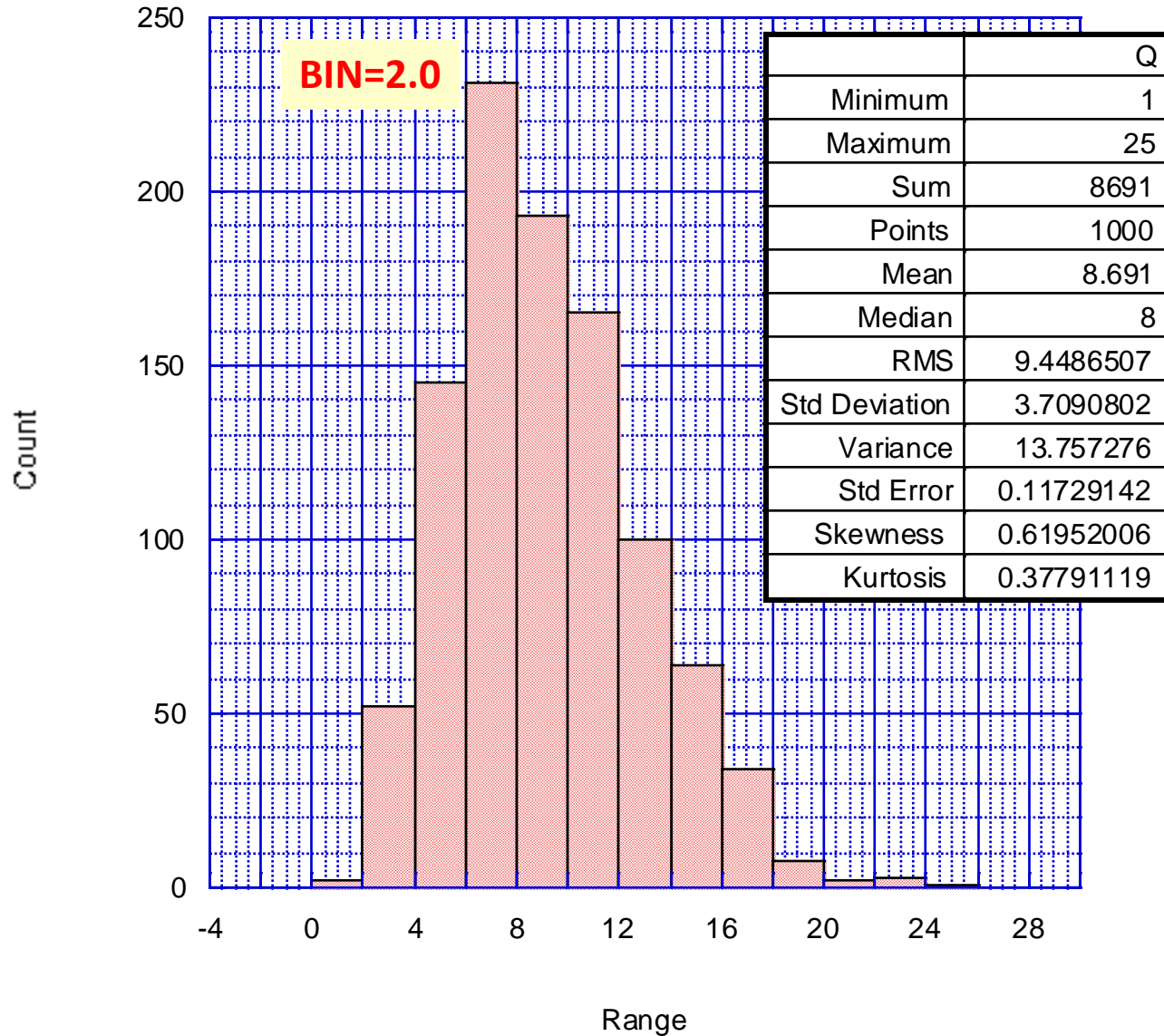


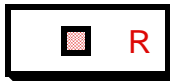
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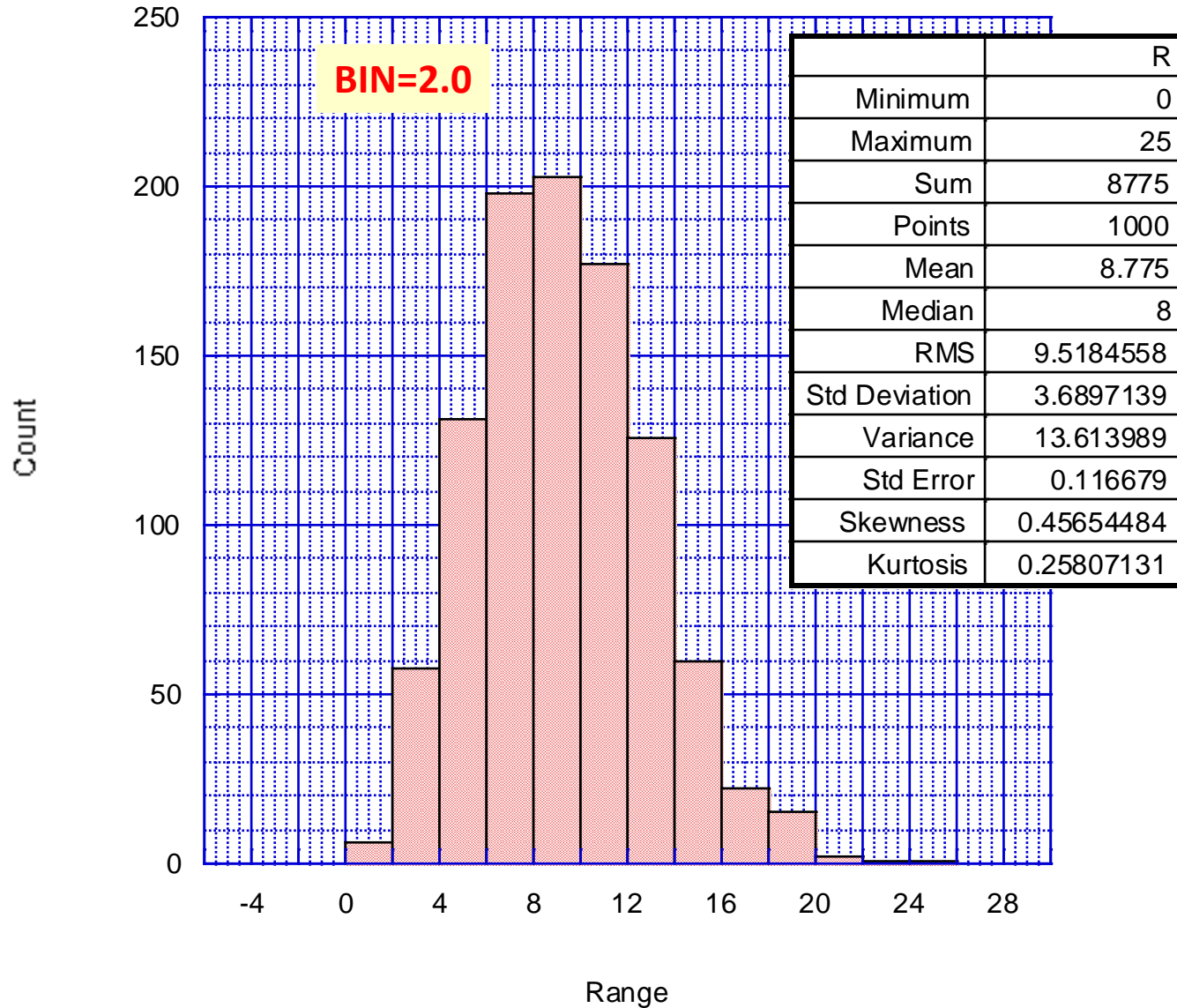


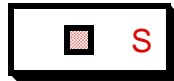
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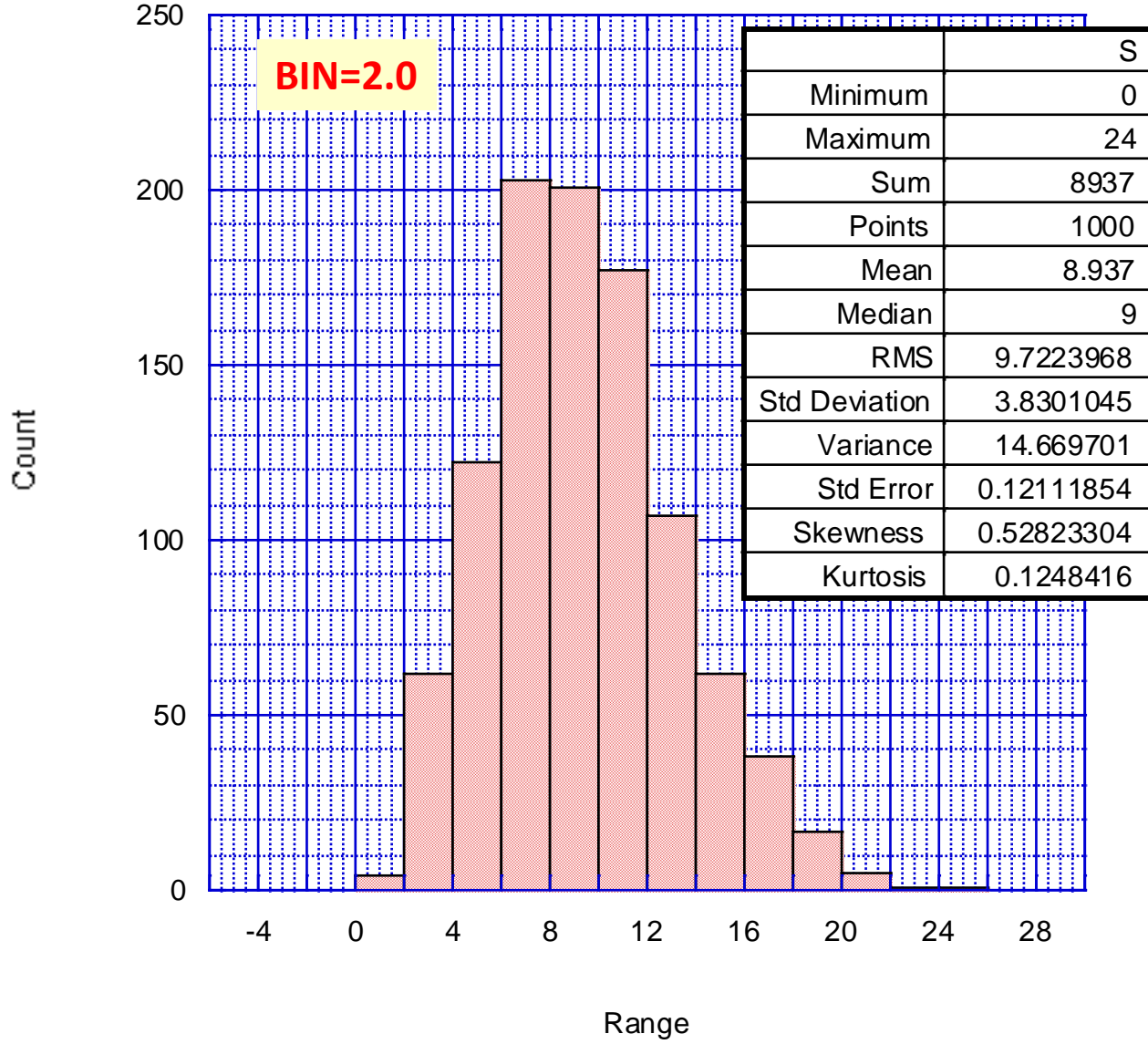


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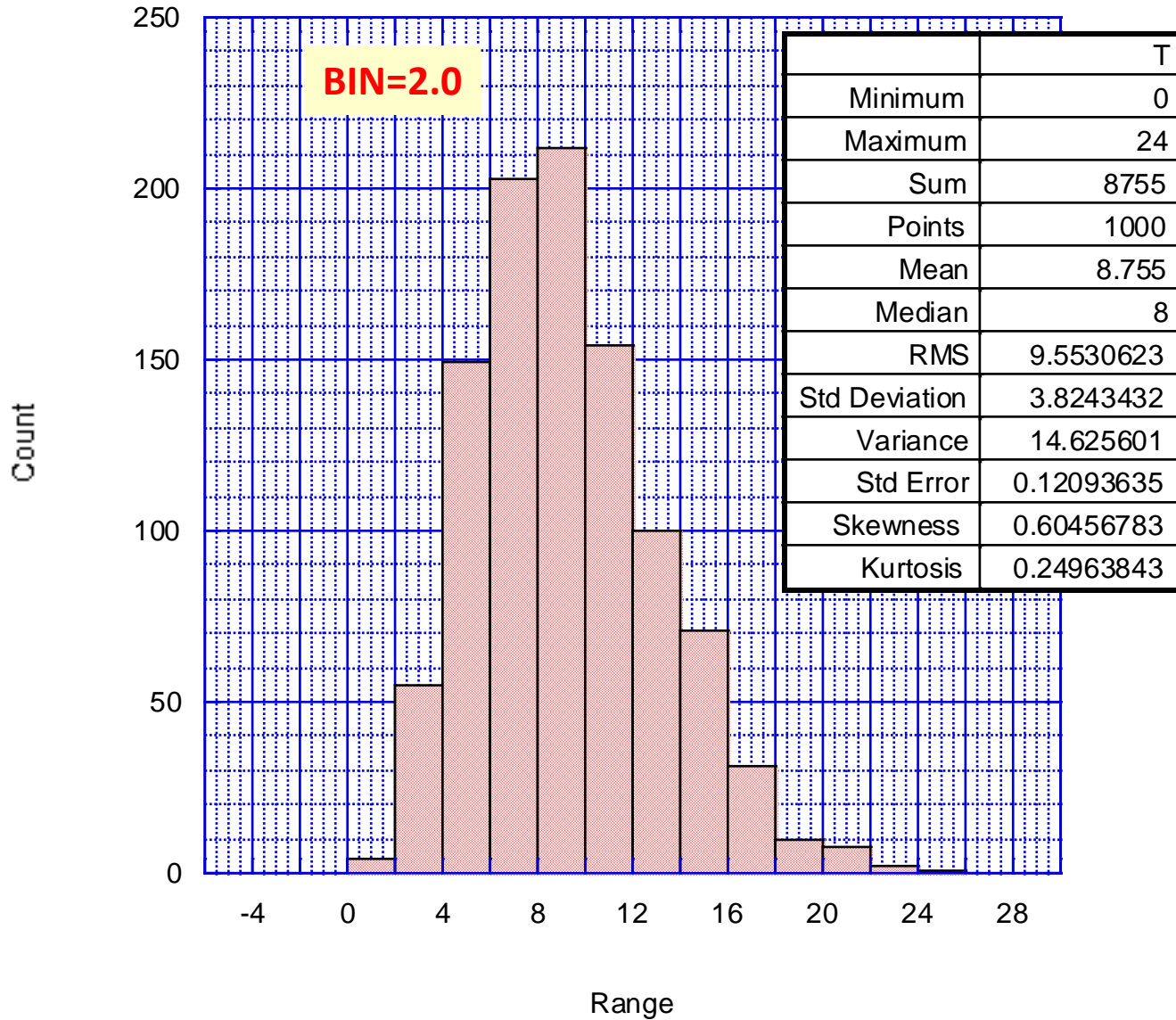


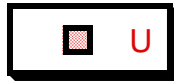
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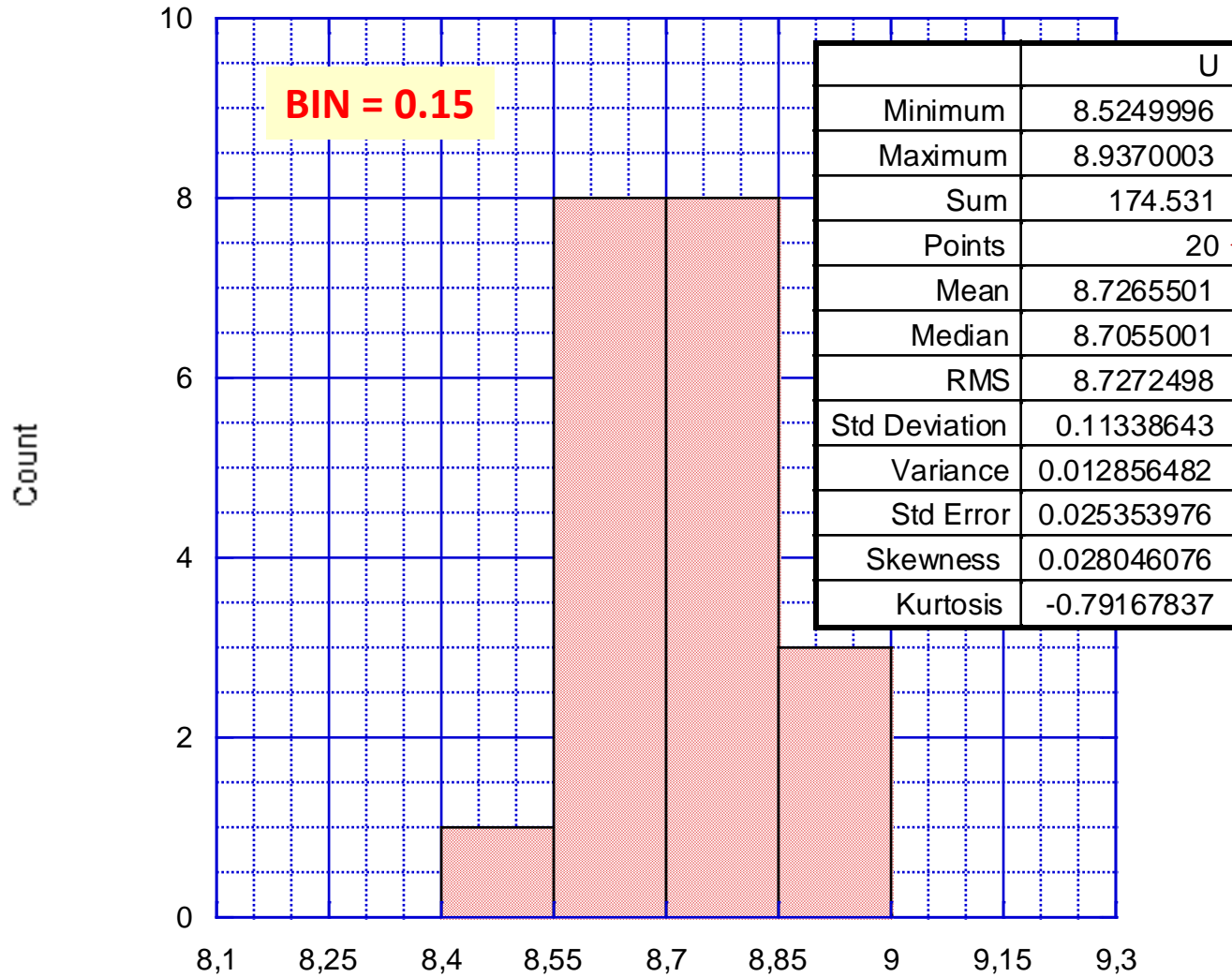


Data 19





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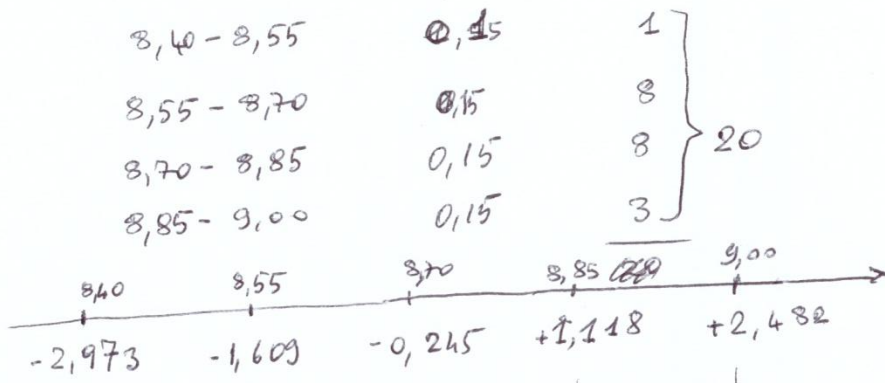


Esempi di istogrammi con kallidagofli (parte 2)

@ mag 23 => histo di 20 valori medi da 20 sottocampioni ciascuno con 1000 points

$N = 20$
 $\langle x \rangle = 8,727$
 $\sigma = 0,11$
 $\frac{\sigma}{\sqrt{N}} = 0,025$
 $min = 8,525$
 $max = 8,937$

$\Delta BIN = 2 \cdot 0,15 \leftarrow$



$$t = \frac{x - \bar{x}}{\sigma(x)}$$

Test del χ^2

App: "Distribution Calculator"

$c_1 = Cum(2,973) = 0,0014745$
 $c_2 = Cum(-1,609) = 0,053808$
 $c_3 = Cum(-0,245) = 0,40323$
 $c_4 = Cum(1,118) = 1 - 0,13178 = 0,86822$
 $c_5 = Cum(2,482) = 1 - 0,0065324 = 0,9934676$

E_k	$(c_2 - c_1)N = 1,047$	$(c_3 - c_2)N = 6,988$	$(c_4 - c_3)N = 9,300$	$(c_5 - c_4)N = 2,505$
O_k	1	8	8	3
$\frac{(E_k - O_k)^2}{E_k}$	0,002	0,147	0,182	0,098

$$\chi_0^2 = 0,428$$

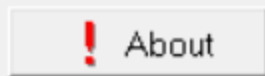
$$\nu = 4 - 3 = 1$$

$$P(\chi_0^2, \chi_0^2; \nu) = 51\%$$

$L C = 95\% : \chi^2 > 0,0010 \ \& \ \chi^2 \leq 5,0239$

"Teorema del limite centrale"

Distribution Calculator



Normal Distribution

Chi-Square

Student's t

F-Distribution

deg. of freedom

1

chi square statistic

0.428

deg. of freedom

1

level of signif.

0.05

alpha

0.5130

critical chi-square value

one sided

0.0010

two sided

5.0239

