

$$\underbrace{(4x^3y^2 + 2x + y)}_{P(x,y)} dx + \underbrace{(2x^4y + x + 3)}_{Q(x,y)} dy = 0 \quad \text{exacta}$$

$$P(x,y) = 4x^3y^2 + 2x + y = F_x$$

$$Q(x,y) = 2x^4y + x + 3 = F_y$$

$$F(x,y) = \int (4x^3y^2 + 2x + y) dx + g(y)$$

$$= \frac{4x^4}{4} y^2 + 2x^2 + yx + g(y)$$

$$F_y = x^4 2y + x + g'(y)$$

$$2x^4y + x + 3 = x^4 2y + x + g'(y) \Rightarrow g'(y) = +3$$

$$g(y) = \int 3 dy = 3y$$

$$F(x,y) = x^4 y^2 + 2x^2 + yx + 3y$$

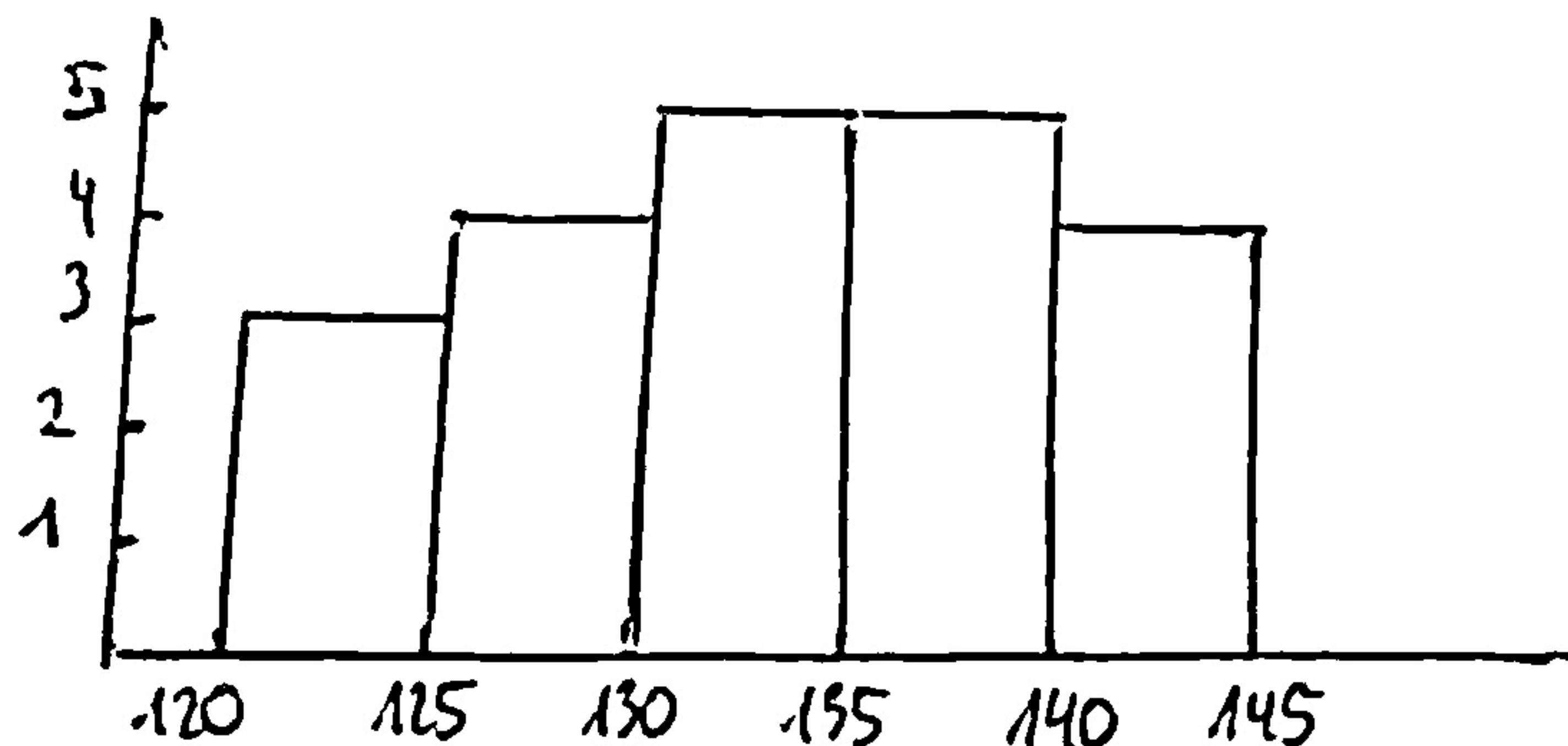
$$x^4 y^2 + 2x^2 + yx + 3y = C$$

Intervalos	Marca de clase x_i	n_i	f_i	$f_i\%$	N_i	F_i	$F_i\%$	$x_i n_i$	$x_i^2 n_i$
[120, 125)	122,5	3	0,14	14	3	0,14	14	367,5	45018,75
[125, 130)	127,5	4	0,19	19	7	0,33	33	510	65025
[130, 135)	132,5	5	0,24	24	12	0,59	59	662,5	87781,25
[135, 140)	137,5	5	0,24	24	17	0,83	83	687,5	94531,25
[140, 145)	142,5	4	0,19	19	21	1,00	100	590	87025
		<u>21</u>						<u>2817,5</u>	<u>379381,25</u>

$$\text{Media} = \frac{21}{5} = 4,2$$

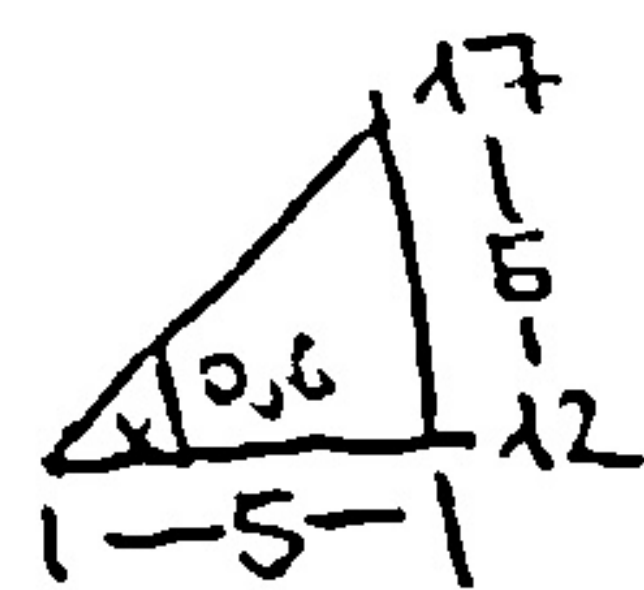
$$\sigma^2 = \frac{x_i^2 n_i}{N} - \frac{x_i n_i}{N} = \frac{379381,25}{5} - \frac{2817,5}{5} = 75312,75$$

$$\sigma = \sqrt{\sigma^2} = \sqrt{75312,75} = 274,432 //$$



Percentil 60

$$\frac{21}{100} \cdot 60 = 12,6$$



$$135 + x \Rightarrow 135 + 0,6 = 135,6$$

$$\frac{x}{5} = \frac{0,6}{5} \Rightarrow x = \frac{5 \cdot 0,6}{5} = 0,6$$