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19-October-2024

Un grupo de atletas se están preparando para un maratón siguiendo una dieta muy estricta. A continuación, viene el peso en kilogramos que ha logrado bajar cada atleta gracias a la dieta y ejercicios.

0.2, 8.4, 14.3, 6.5, 3.4, 0.3, 2.4, 2.1, 3.5  
12.0, 0.7,

4.6, 5.2, 6.2, 8.6, 4.6, 9.1, 4.3, 3.5, 1.5,  
6.4, 15.2, 16.1, 19.8, 5.4, 12.1, 9.6, 8.7,  
12.1, 3.2

Dato mayor = 19.8

Dato menor = 0.2

Rango = R    intervalos = k    Amplitud

$$R = x_{\max} - x_{\min} \quad k = 1 + 3.22 \text{ Log } 30 \quad A = \frac{R}{k} = \frac{19.6}{6}$$

$$R = 19.8 - 0.2$$

$$R = 19.6$$

$$k = 5.90$$

$$k = 6$$

$$A = 3.27$$

Tabla de frecuencia

Clases

0.2-3.4	1.8	7	0.233	7
3.4-6.7	5.05	11	0.3666	18
6.7-10.01	8.3	5	0.166	23
10.01-13.28	11.6	3	0.1	26
13.28-16.55	14.9	3	0.1	29
16.55-19.82	18.1	1	0.033	30

$$F = (x = 19 + 15)$$

$$x = \frac{0.2 + 3.4}{2}$$

$$x = \frac{3.9 + 6.7}{2}$$

$$x = \frac{6.7 + 10.01}{2}$$

$$x = \frac{10.01 + 13.28}{2}$$

$$x = \frac{3.6}{2} = 1.8$$

$$x = \frac{10.1}{2} = 5.05$$

$$x = \frac{16.7}{2} = 8.3$$

$$x = \frac{23.29}{2} = 11.6$$

$$x = \frac{13.28 + 16.55}{2}$$

$$x = \frac{16.55 + 19.82}{2}$$

$$x = \frac{29.83}{2} = 14.9$$

$$x = \frac{36.37}{2} = 18.1$$

$$Fr = \frac{f}{\log 30}$$

$$fr = \frac{7}{30} = 0.233$$

$$\frac{11}{30} = 0.3666$$

$$\frac{5}{30} = 0.166$$

$$\frac{3}{30} = 0.1$$

$$\frac{6}{30} = 0.033$$

Media de datos agrupados =  $\bar{x} =$

Suma de los factores = 203.6

$$\bar{x} = \frac{203.6}{30} = 6.78$$

Mediana de datos agrupados = Me

$$Me = \frac{5.4 + 6.2}{2} = \frac{11.6}{2} = 5.8$$

## Moda de datos agrupados

3

$$MO = 3.5, 4.6 \text{ y } 12.1$$

Varianza datos agrupados =  $s^2 =$

$$r^2 = \frac{\sum (x - \bar{x})^2}{n}$$

$$r^2 = \frac{(0.2 - 6.78)^2 + (0.3 - 6.78)^2 + (0.7 - 6.78)^2 + (1.5 - 6.78)^2 + (2.1 - 6.78)^2 + (2.4 - 6.78)^2 + (3.2 - 6.78)^2 + (5.4 - 6.78)^2 + (3.5 - 6.78)^2 + (3.5 - 6.78)^2 + (4.3 - 6.78)^2 + (4.6 - 6.98)^2 + (4.6 - 6.78)^2 + (5.2 - 6.78)^2 + (5.4 - 6.78)^2 + (6.2 - 6.78)^2 + (6.4 - 6.78)^2 + (6.5 - 6.78)^2 + (8.4 - 6.78)^2 + (8.6 - 6.78)^2 + (9.1 - 6.78)^2 + (9.6 - 6.78)^2 + (12.0 - 6.78)^2 + (12.1 - 6.78)^2 + (12.1 - 6.78)^2 + (14.3 - 78)^2 + (15.2 - 6.78)^2 + (16.1 - 6.78)^2 + (19.8 - 6.78)^2}{30}$$

$$r^2 = (-6.58) + (-6.48) + (6.08) + (-5.28) + (-4.68) + (-4.58) + (3.58) + (-3.38) + (-3.38) + (-2.48) + (-2.18) + (-2.18) + (-1.58) + (-1.38) + (-0.58) + (-0.38) + (-0.28) + (1.62) + (1.72) + (1.82) + (1.92) + (2.32) + (2.82) + (2.82) + (5.22) + (5.32) + (5.32) + (5.34) + (7.52) + (8.42) + (9.32)^2 + (13.02)^2$$

$$r^2 = 43.3 + 41.60 + 36.9 + 27.87 + 21.90 + 19.18 + 12.81 + 11.42 + 11.38 + 6.1 + 4.7 + 2.49 + 1.90 + 0.33 + 1.14 + 0.07 + 2.6 + 2.95 + 3.31 + 3.68 + 5.38 + 7.95 + 7.82 + 27.24 + 28.30 + 28.30 + 56.55 + 70.89 + 86.86 + 86 + 169.52$$

$$r^2 = \frac{38.1}{30}$$

$$r^2 = 12.8$$

Desviación

$$r^2 = 12.8$$

$$r = \sqrt{r^2}$$

$$r = \sqrt{12.8}$$

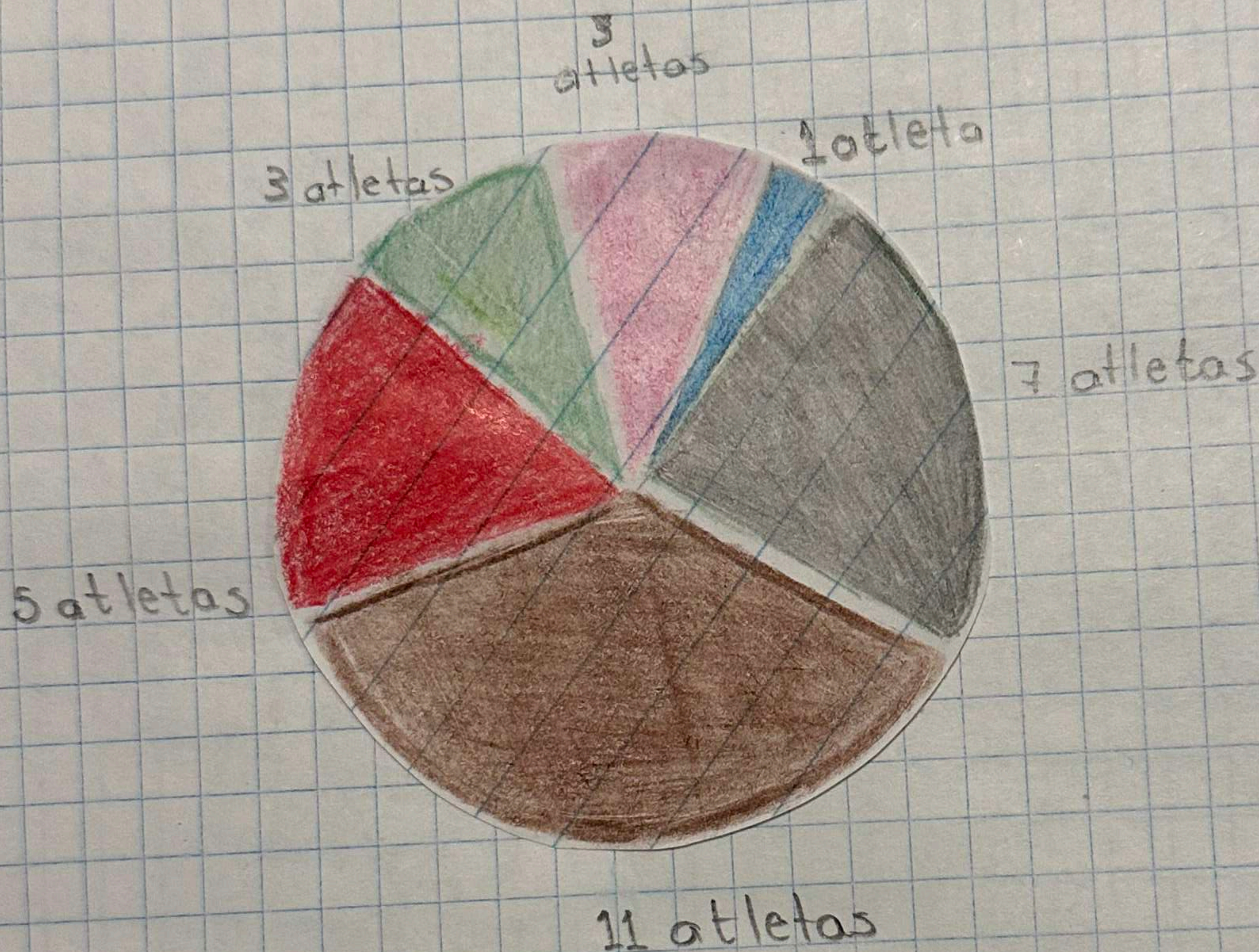
$$r = 3.57$$

Coefficiente de Variación

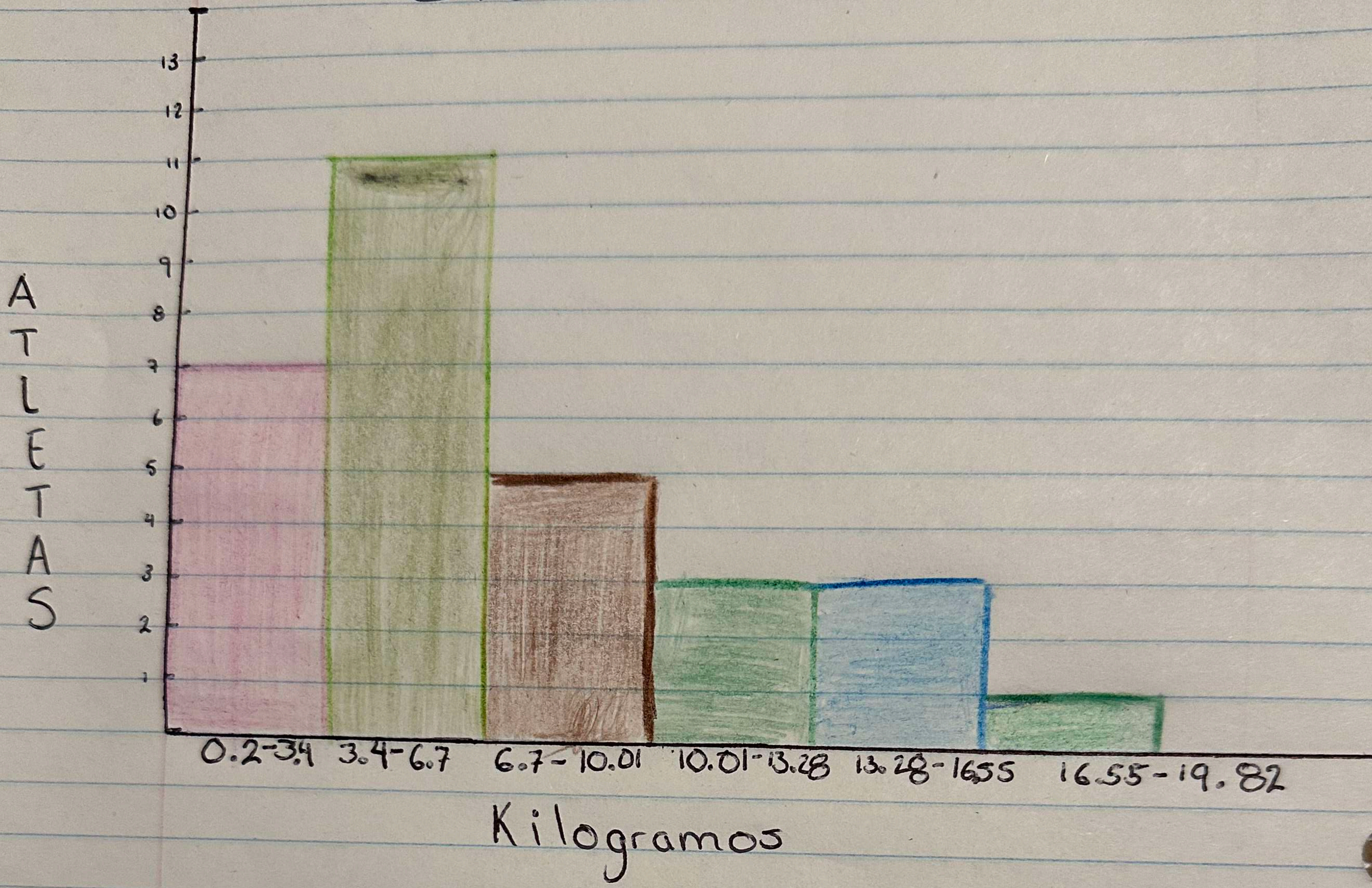
$$CV = \frac{r}{\bar{x}} = \frac{3.57}{6.78} = 0.526$$

# Grafica de pastel

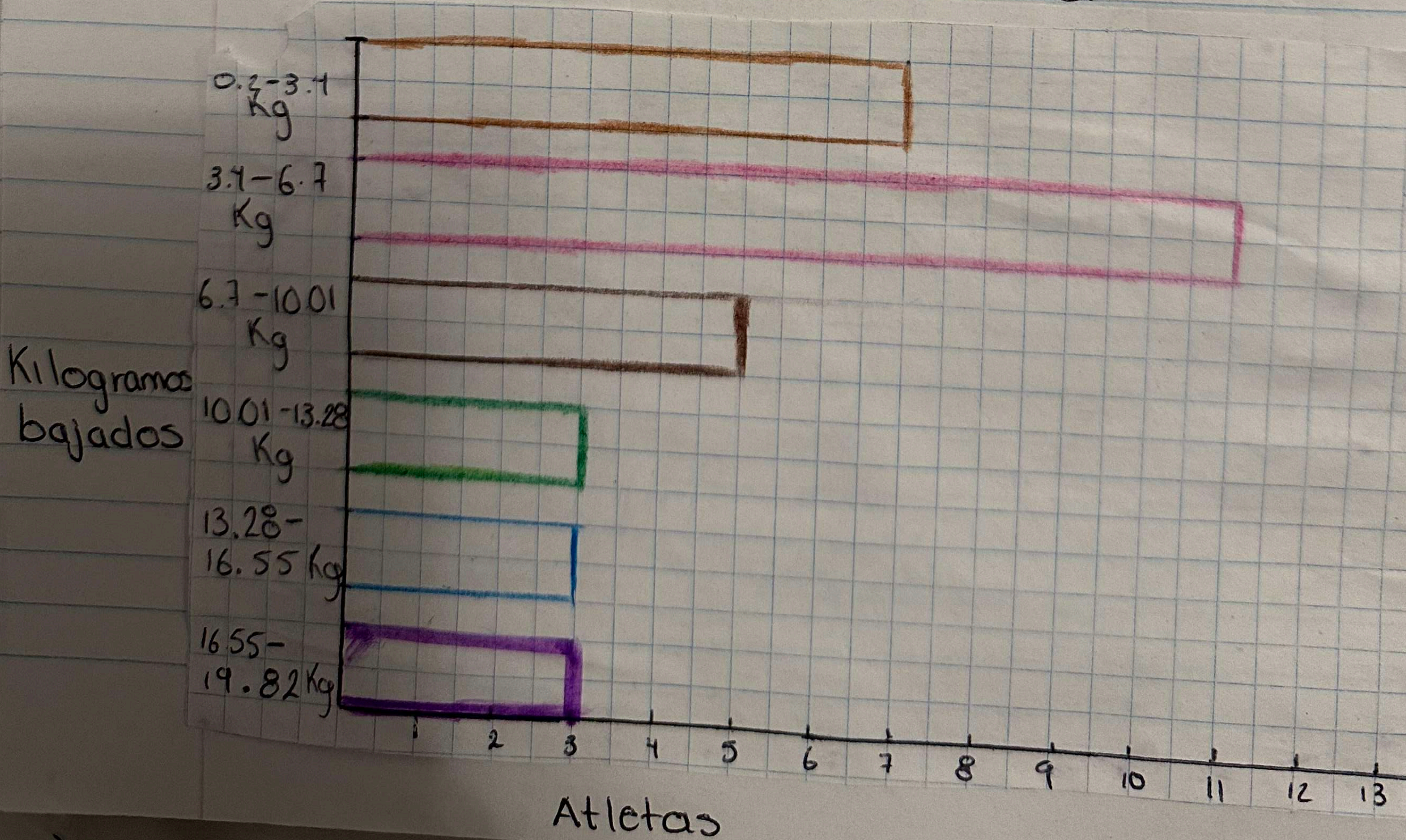
- 0.2 - 3.4 Kilogramos bajados
- 3.4 - 6.7 Kilogramos bajados
- 6.7 - 10.01 Kilogramos bajados
- 10.01 - 13.28 Kilogramos bajados
- 13.28 - 16.55 Kilogramos bajados
- 16.55 - 19.82 Kilogramos bajados



# Grafica de barras



# Grafica de Columnas



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