Exercise 1: **(1.75 ptos)** Given the following table representing a random variable:

x_i	[0,2]	(2,4]	(4,6]	(6,8]
f_i	12	15	9	7

a) Find the range and the median $R = 8 \quad Me = (2,4]$

b) Find Pearson's coefficient of variation $CV = 0.59$

Exercise 2: **(1.5 points)** Given the following table showing the values and frequencies of a certain random variable

x_i	1	2	3	4	5
f_i	9	6	8	9	4

a) Find the percentage corresponding to each value of the variable

x_i	1	2	3	4	5
f_i	9	6	8	9	4
%	25	17	22	25	11

b) Find the measures of central tendency $Mo = 1,4 \quad Me = 3 \quad \bar{x} = 2.81$

Exercise 3: **(2.5 ptos)** Work out:

a) $\sqrt[5]{a^3} \cdot \sqrt[3]{a^{-2}} : \sqrt{a^{-1}} = \sqrt[30]{a^{13}}$

b) $\dfrac{\sqrt{a^{-1}} \cdot \sqrt[7]{a^{-5}b^2}}{\sqrt[10]{a^4 b^{-7}}} = \dfrac{1}{a} \cdot \sqrt[70]{\dfrac{b^{69}}{a^{43}}}$

c) $3\sqrt{75} - 2\sqrt{48} + \sqrt{300} = 17\sqrt{3}$

Exercise 4: **(1.5 ptos)** Find these unions and intersections of intervals and **write them as inequalities too**

a) $[-5,1] \cup [0,+\infty) = [-5,+\infty) \rightarrow x \geq -5$

b) $(-3,2] \cap [0,5] = [0,2] \rightarrow 0 \leq x \leq 2$

c) $(-\infty,3) \cap [2,+\infty) = [2,3) \rightarrow 2 \leq x < 3$

Exercise 5: **(1.75 ptos)** Work out and express the answers using scientific notation:

a) $4.25 \cdot 10^{-4} - 3.1 \cdot 10^{-3} + 8.32 \cdot 10^{-1} = 8.29 \cdot 10^{-1}$

b) $(7.12 \cdot 10^{-5}) \cdot (3.41 \cdot 10^{-8}) = 2.43 \cdot 10^{-12}$

c) $(1.85 \cdot 10^{-1}) : (7.92 \cdot 10^{-5}) = 2.34 \cdot 10^{3}$

Exercise 6: (1 pto) Eighteen elves can hang one thousand and twenty Christmas balls in fifteen trees in one day. How many elves do we need to hang three thousand balls in twenty-one trees?   75 elves