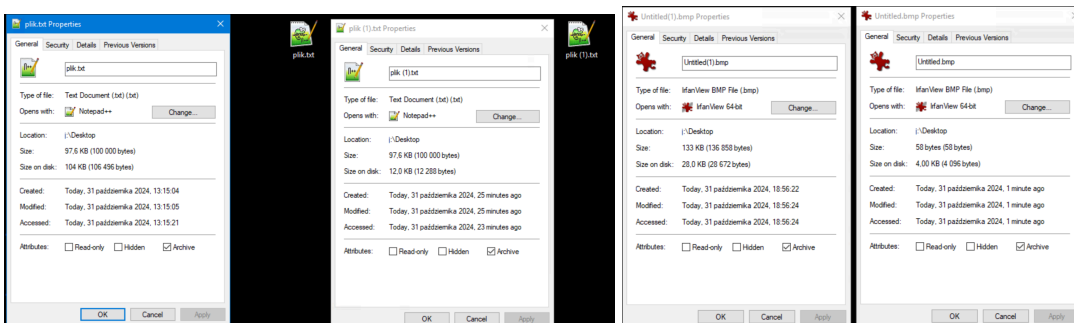
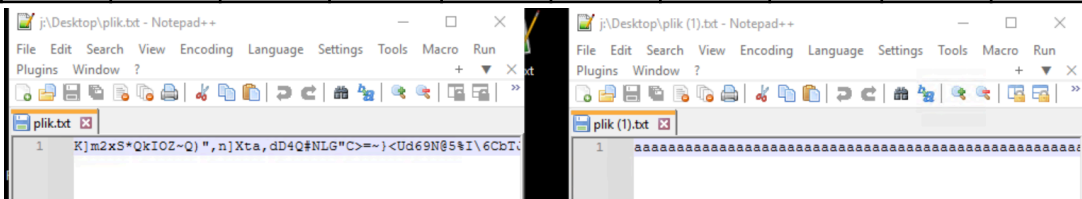


ZADANIE 1

[bytes]	plik tekstowy 100 000 znakowy					BMP				
stopień kompresji	oryginalny plik	*LZMA2	LZMA2	PPMd	BZip2	oryginalny	*LZMA2	LZMA2	PPMd	BZip2
najmniejszy	plik.txt 100 000	83 792	83 776	84 926	82 886	Untitled.bmp 58	164	157	157	200
Stopień kompresji(SK)	-----	1,19	1,19	1,18	1,21	—	0,35	0,37	0,37	0,29
największy	plik(1).txt 100 000	221	214	173	177	Untitled(1).bmp 136 858	267	260	224	233
SK	—	452,49	467,29	578,03	564,97	-----	512,58	526,38	610,97	587,37



plik.txt



100 000 2024-10-31 13:15 2024-10-31 13:15



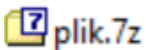
83 792 2024-10-31 13:19 2024-10-31 13:19



83 776 2024-10-31 13:23 2024-10-31 13:23

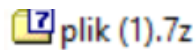


84 926 2024-10-31 13:24 2024-10-31 13:24



82 886 2024-10-31 13:25 2024-10-31 13:25

plik(1).txt



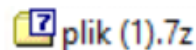
221 2024-10-31 13:06 2024-10-31 13:06



100 000 2024-10-31 12:50 2024-10-31 12:50



214 2024-10-31 13:09 2024-10-31 13:09



173 2024-10-31 13:10 2024-10-31 13:10



177 2024-10-31 13:12 2024-10-31 13:12

Untitled.bmp

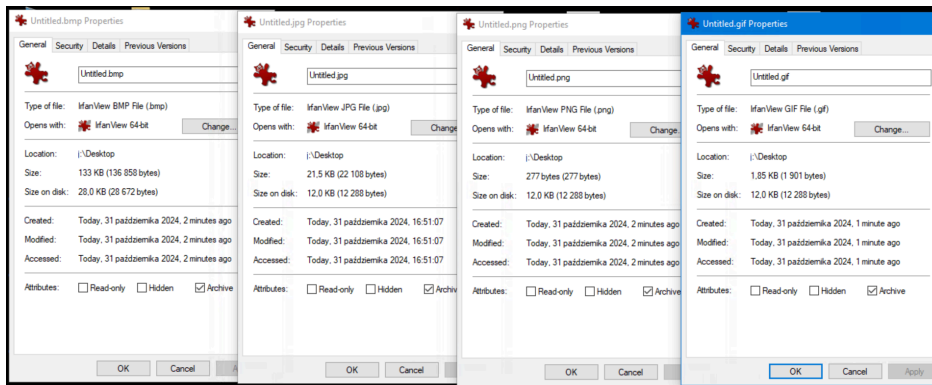
	Untitled.bmp	58	2024-10-31 18:39	2024-10-31 18:39
	Untitled.7z	164	2024-10-31 18:47	2024-10-31 18:47
	Untitled.7z	157	2024-10-31 19:00	2024-10-31 19:00
	Untitled.7z	157	2024-10-31 19:01	2024-10-31 19:01
	Untitled.7z	200	2024-10-31 19:02	2024-10-31 19:02

Untitled(1).bmp

	Untitled(1).bmp	136 858	2024-10-31 18:56	2024-10-31 18:56
	Untitled(1).7z	267	2024-10-31 18:57	2024-10-31 18:57
	Untitled(1).7z	260	2024-10-31 19:04	2024-10-31 19:04
	Untitled(1).7z	224	2024-10-31 19:05	2024-10-31 19:05
	Untitled(1).7z	233	2024-10-31 19:06	2024-10-31 19:06

ZADANIE 2

obraz 1200 na 900 pikseli



$$CR = \frac{|RozmiarPrzedSkompresowaniem|}{|RozmiarPoSkompresowaniu|}$$

Stopień kompresji:

JPG 136 858/22 108 = 6,19

PNG 136 858/277 =494,07

GIF 136 858/1901 =71,99

ZADANIE 3

$$\begin{aligned}n^2 \quad p &= \frac{1}{n^2} \\ H &= \sum_{i=1}^{n^2} \frac{1}{n^2} \log_2 \frac{1}{\frac{1}{n^2}} = \\ &= n^2 \left(\frac{1}{n^2} \log_2 n^2 \right) = \\ &= \log_2 n^2 = \\ &= 2 \log_2 n\end{aligned}$$