|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Runtime to Compress (seconds)** | | | | |
| **File** | **LZW** | **Mod -n** | **Mod -r** | **Compress.exe** |
| All.tar | 2809 | 9.83598 | 29.72625 | 0.16 |
| Assig2.doc | 1.08 | 0.41533 | 0.41129 | 0.04 |
| Bmps.tar | 235 | 22.80613 | 22.42693 | 0.06 |
| Code.txt | 0.46 | 0.28421 | 0.29220 | 0.04 |
| Code2.txt | 0.34 | 0.26319 | 0.25317 | 0.04 |
| Edit.exe | 8.66 | 1.25493 | 1.27494 | 0.07 |
| Frosty.jpg | 3.57 | 1.40098 | 1.54408 | ---------- |
| Gone\_fishing.bmp | 0.15 | 0.19814 | 0.22515 | 0.04 |
| Large.txt | 202 | 3.28959 | 4.48817 | 0.1 |
| Lego-big.gif | 2.02 | 1.32394 | 1.15982 | ---------- |
| Medium.txt | 0.19 | 0.19314 | 0.19314 | 0.04 |
| Texts.tar | 405 | 3.76766 | 5.03869 | 0.13 |
| Wacky.bmp | 1.03 | 19.53921 | 20.86679 | 0.04 |
| Winnt256.bmp | 3.5 | 1.00871 | 0.92066 | 0.05 |

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| --- | --- | --- | --- | --- |
| **Runtime to Decompress (seconds)** | | | | |
| **File** | **LZW** | **Mod -n** | **Mod -r** | **Compress.exe** |
| All.tar | 0.32 | 0.35025 | 0.47834 | 0.09 |
| Assig2.doc | 0.11 | 0.10909 | 0.10711 | 0.04 |
| Bmps.tar | 0.18 | 0.15409 | 0.15311 | 0.05 |
| Code.txt | 0.1 | 0.12014 | 0.11709 | 0.04 |
| Code2.txt | 0.11 | 0.10709 | 0.10409 | 0.04 |
| Edit.exe | 0.12 | 0.14411 | 0.14411 | 0.05 |
| Frosty.jpg | 0.12 | 0.13810 | 0.14016 | ----------- |
| Gone\_fishing.bmp | 0.1 | 0.10009 | 0.09807 | 0.03 |
| Large.txt | 0.19 | 0.23016 | 0.29220 | 0.06 |
| Lego-big.gif | 0.11 | 0.15311 | 0.13109 | ---------- |
| Medium.txt | 0.1 | 0.10407 | 0.10809 | 0.06 |
| Texts.tar | 0.22 | 0.22018 | 0.31522 | 0.08 |
| Wacky.bmp | 0.13 | 0.13110 | 0.12809 | 0.05 |
| Winnt256.bmp | 0.11 | 0.13810 | 0.12108 | 0.05 |

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| --- | --- | --- | --- | --- |
| **Compression Ratio (original size / new size)** | | | | |
| **File** | **LZW** | **Mod -n** | **Mod -r** | **Compress.exe** |
| All.tar | 1.639344 | 1.666667 | 2.564103 | 2.564103 |
| Assig2.doc | 1.162791 | 2.173913 | 2.173913 | 2.173913 |
| Bmps.tar | 1.190476 | 12.5 | 12.5 | 14.28571 |
| Code.txt | 2.325581 | 2.857143 | 2.857143 | 2.941176 |
| Code2.txt | 2.380952 | 2.702703 | 2.702703 | 2.777778 |
| Edit.exe | 0.943396 | 1.515152 | 1.538462 | 1.5625 |
| Frosty.jpg | 0.714286 | 0.769231 | 0.740741 | --------- |
| Gone\_fishing.bmp | 1.851852 | 1.923077 | 1.923077 | 1.923077 |
| Large.txt | 2 | 2.380952 | 2.272727 | 2.325581 |
| Lego-big.gif | 0.724638 | 0.763359 | 0.763359 | --------- |
| Medium.txt | 1.923077 | 1.960784 | 1.960784 | 2 |
| Texts.tar | 1.369863 | 9.090909 | 2.325581 | 2.439024 |
| Wacky.bmp | 250 | 250 | 250 | 250 |
| Winnt256.bmp | 99.0099 | 2.5 | 2.5 | 2.5 |

* Note: Compress.exe refused to work on Frosty and Lego-big. I believe this is because their formats mean they were already more or less maximally compressed.
* Note II: I originally calculated the Compression ratio in the inverse way, and recorded them as percentages. As such, the data in each entry is now (prev / 100)^-1