r_k	Count	$p_r(r_k)$
$r_0 = 0$	7	7/49 = 0.14
$r_1 = 3$	4	4/49 = 0.08
$r_2 = 49$	4	4/49 = 0.08
$r_3 = 77$	5	5/49 = 0.10
$r_4 = 111$	17	17/49 = 0.35
$r_5 = 122$	5	5/49 = 0.10
$r_6 = 200$	1	1/49 = 0.02
$r_7 = 255$	6	6/49 = 0.12

r_k	$p_r(r_k)$													
$r_4 = 111$	0.35	00	0.35	00	0.35	00	0.35	00	0.35	00	0.38	1	0.61	0
$r_0 = 0$	0.14	010	0.14	010	0.18	11	0.20	10	0.26	01	0.35	00	0.38	1
$r_7 = 255$	0.12	011	0.12	011	0.14	010	0.18	11	0.20	10	0.26	01		
$r_3 = 5$	0.10	100	0.10	100	0.12	011	0.14	010	0.18	11				
$r_5 = 122$	0.10	101	0.10	101	0.10	100	0.12	011						
$r_1 = 3$	0.08	111	0.10	110	0.10	101								
$r_2 = 49$	0.08	1100	0.08	111										
$r_6 = 200$	0.02	1101												

Huffman code

$r_0 = 010$
$r_1 = 111$
$r_2 = 1100$
$r_3 = 100$
$r_4 = 00$
$r_5 = 101$
$r_6 = 1101$
$r_7 = 011$

Compression Ratio

Original average pixel bits: 8 bits

After compression

$L_{avg} = \Sigma\, l(r_k)p_r(r'_k)$

$3 * 0.14 + 3 * 0.08 + 4 * 0.08 + 3 * 0.10 + 2 * 0.35 + 3 * 0.10 + 4 * 0.02 + 3 * 0.12 =$

$0.42 + 0.24 + 0.32 + 0.3 + 0.7 + 0.30 + 0.08 + 0.36 = 2.72$ bits

$C_r = 8 / 2.72 = 2.94$

$R_D = 1 - 1 / 2.94 = 0.6599$

$R_D = 65.99\%$ redundency