| Input   | Compaction Process                      |    |            |                      |    |            |                      |    |       |                      |    |       | Encoded       |
|---|---|----|------------|----------------------|----|------------|----------------------|----|-------|----------------------|----|-------|---------------|
|   | 1 <sup>st</sup> call                    |    |            | 2 <sup>nd</sup> call |    |            | 3 <sup>rd</sup> call |    |       | 4 <sup>th</sup> call |    |       | value         |
| [1,1,1,1,<br>1,0,1,0,<br>0,0,0,0,<br>1,0,0,0] | [1,1,1,1,1,0,1,0,<br>0,0,0,0,1,0,0,0]   |    |            | [1,1,1,1,1,0,1,0]    |    |            | [1,1,1,1]            |    |       | [1,1]                |    |       | (-40) + (-8)  |
|   | NL                                      | NR | W          | NL                   | NR | W          | NL                   | NR | W     | NL                   | NR | W     | = -48         |
|   | 6                                       | 1  | 8*(-5)=-40 | 4                    | 2  | 4*(-2)=-8  | 2                    | 2  | 2*0=0 | 1                    | 1  | 1*0=0 |               |
| [1,1,1,1,<br>1,0,0,0,<br>0,0,1,0,<br>0,0,0,0] | [1,1,1,1,1,0,0,0,<br>0,0,1,0,0,0,0,0]   |    |            | [1,1,1,1,1,0,0,0]    |    |            | [1,1,1,1]            |    |       | [1,1]                |    |       | (-32) + (-12) |
|   | NL                                      | NR | W          | NL                   | NR | W          | NL                   | NR | W     | NL                   | NR | W     | = -44         |
|   | 5                                       | 1  | 8*(-4)=-32 | 4                    | 1  | 4*(-3)=-12 | 2                    | 2  | 2*0=0 | 1                    | 1  | 1*0=0 |               |
| [1,0,0,0,<br>1,0,0,0,<br>0,0,1,0,<br>1,0,1,1] | [1,0,0,0,1,0,0,0,<br>0,0,1,0,1,0,1,1]   |    |            | [0,0,1,0,1,0,1,1]    |    |            | [1,0,1,1]            |    |       | [1,1]                |    |       | (16) + (8)    |
|   | NL                                      | NR | W          | NL                   | NR | W          | NL                   | NR | W     | NL                   | NR | W     | +(2) = 26     |
|   | 2                                       | 4  | 8*(2)=-16  | 1                    | 3  | 4*(2)=-8   | 1                    | 2  | 2*1=2 | 1                    | 1  | 1*0=0 |               |
| [1,0,0,0,<br>0,0,0,0,<br>1,1,1,1,<br>1,1,1,1] | [1,0,0,0,0,0,0,0,0,<br>1,1,1,1,1,1,1,1] |    |            | [1,1,1,1,1,1,1]      |    |            | [1,1,1,1]            |    |       | [1,1]                |    |       | (56) + (0)    |
|   | NL                                      | NR | W          | NL                   | NR | W          | NL                   | NR | W     | NL                   | NR | W     | + (0) = 56    |
|   | 1                                       | 8  | 8*(7)=-56  | 4                    | 4  | 4*(0)=0    | 2                    | 2  | 2*0=0 | 1                    | 1  | 1*0=0 |               |