#### Parsing process for run\_level\_one

Inputs to this process are bits from slice data, the scan position n of the previous non-zero transform coefficient in inverse scan order, and the variable TrOne.

Outputs of this process are the syntax element run\_level\_one and the variable TrOne.

The value of run\_level\_one is derived as follows.

* The variable N is set equal to (1 << log2TrafoSize) >> (cIdx > 0 ? 2 : 0).
* The variable blockType is derived as

blockType = (cIdx == 0 ? (PredMode==MODE\_INTRA ? 0 : slice\_type + 1) + (N > 8 ? 5 : 2) : cIdx – 1) (9‑33)

* The variable tableIdx is derived as

tableIdx = (blockType = = 2 | | blockType = = 5) ? (N <= 8 ? 0 : 1) : (N <= 8 ? 2 : 3) (9‑34)

* The variable maxRun is set equal to n.
* The variable maxRunIdx is set equal to Min(28, maxRun).
* The variable vlcNum is derived from tableIdx and maxRunIdx as shown in Table 9‑9.
* The parsing process described in subclause 9.2.1 is invoked with vlcNum as input and the variable codeNum as output.If blockType is equal to 2 or blockType is equal to 5, the value of run\_level\_one is derived as follows.
  + If N is equal to 4, the variable largeOnePos is derived from trOne and maxRunIdx as shown in Table 9‑10.
  + Otherwise (N is greater than 4), the variable largeOnePos is derived from trOne and maxRunIdx as shown in Table 9‑11.
  + The variables levelGreaterThanOneFlag and runOfZeros are derived as follows.

if ( largeOnePos > 0 ) {  
 if( codeNum < min(largeOnePos, maxRunIdx + 2 ) ) {  
 levelGreaterThanOneFlag = 0  
 runOfZeros = codeNum  
 } else if( codeNum < (maxRunIdx << 1 ) + 4 – largeOnePos ) {  
 if(( codeNum + largeOnePos ) & 1 ) {  
 levelGreaterThanOneFlag = 0  
 runOfZeros = (codeNum + largeOnePos - 1) >> 1  
 } else {  
 levelGreaterThanOneFlag = 1  
 runOfZeros = (codeNum - largeOnePos)>>1 (9‑35)  
 }  
 } else {  
 levelGreaterThanOneFlag = 1  
 runOfZeros = codeNum - maxRunIdx – 2  
 }  
 } else {  
 if( codeNum & 1) {  
 levelGreaterThanOneFlag = 0   
 runOfZeros = (codeNum - 1)>>1  
 } else {  
 runOfZeros = codeNum >> 1  
 levelGreaterThanOneFlag = ((codeNum >> 1) <= maxRunIdx)?1:0  
 }  
 }

* + The syntax element run\_level\_one is derived as

run\_level\_one = levelGreaterThanOneFlag ? runOfZeros + maxRun : runOfZeros (9‑36)

* Otherwise (blockType is not equal to 2 and blockType is not equal to 5), the value of run\_level\_one is derived as follows.
  + If N is equal to 4, the variables onePos and largeOnePos are derived from trOne and maxRunIdx as shown in Table 9‑12 and Table 9‑13.
  + Otherwise (N is greater than 4), the variables onePos and largeOnePos are derived from trOne and maxRunIdx as shown in Table 9‑14 and Table 9‑15.
  + ~~The variable levelGreaterThanOneFlag is derived as~~

~~levelGreaterThanOneFlag = codeNum <= maxRun + 1 ? 0 : 1 (9‑37)~~

* + If maxRun is less than 28, the variable runOfZeros is derived from maxRun and codeNum as follows. ~~shown in Table 9‑12.~~

if (codeNum < onePos) {  
 levelGreaterThanOneFlag = 0  
 runOfZero = codeNum  
 }  
 else if (codeNum == onePos) {  
 levelGreaterThanOneFlag = 0   
 runOfZero = maxRunIdx + 1  
 }

else if (codeNum < (largeOnePos - 1)) {

levelGreaterThanOneFlag = 0   
 runOfZero = codeNum - 1  
 }   
 else if (codeNum < (largeOnePos + 2\*( maxRunIdx + 2 - largeOnePos))) {

if ((codeNum + largeOnePos) & 1) {

levelGreaterThanOneFlag = 0   
 runOfZero = (codeNum + largeOnePos - 3) >> 1

}

else {

levelGreaterThanOneFlag = 0   
 runOfZero = (codeNum - largeOnePos) >> 1

}

}

* + Otherwise (maxRun is not less than 28), ~~the variable runOfZeros is derived as~~ the variable levelGreaterThanOneFlag and runOfZeros are derived as

levelGreaterThanOneFlag = codeNum <= maxRun + 1 ? 0 : 1 (9‑37)

runOfZeros = codeNum <= maxRun + 1 ? codeNum : codeNum – maxRun – 2 (9‑38)

* + The syntax element run\_level\_one is derived as

run\_level\_one = levelGreaterThanOneFlag ? runOfZeros + n : runOfZeros (9‑39)

* The variable trOne is derived as

trOne = (trOne = = 0 | | levelGreaterThanOneFlag) ? 0 : Max(4, trOne + 1) (9‑40)

Table 9‑9 – Derivation of vlcNum from tableIdx and maxRunIdx

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **maxRunIdx** | | | | | | | | | | | | | | |
| **tableIdx** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** |
| 0 | 8 | 0 | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 |
| 1 | 8 | 0 | 0 | 1 | 1 | 1 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 5 |
| 2 | 8 | 0 | 0 | 0 | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 3 | 8 | 0 | 1 | 1 | 1 | 1 | 5 | 5 | 5 | 5 | 2 | 2 | 2 | 6 | 6 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **maxRunIdx** | | | | | | | | | | | | | | |
| **tableIdx** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** | **25** | **26** | **27** | **28** | **29** |
| 0 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 3 | 6 |
| 1 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2 | 5 | 5 | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 5 |
| 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 3 |

Table 9‑10 – Derivation of largeOnePos from tableIdx and maxRunIdx when N is equal to 4

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **maxRunIdx** | | | | | | | | | | | | | | |
| **trOne** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** |
| 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 1 | 2 | 3 | 4 | 5 | 6 | 5 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 4 | 2 |
| 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | NA |
| 3 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | NA | NA |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | NA | NA | NA |

Table 9‑11 – Derivation of largeOnePos from tableIdx and maxRunIdx when N is greater than 4

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **maxRunIdx** | | | | | | | | | | | | | | |
| **trOne** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** |
| 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 4 | 5 | 5 | 6 | 6 | 6 | 6 | 6 |
| 1 | 2 | 4 | 4 | 6 | 6 | 8 | 8 | 10 | 11 | 13 | 15 | 13 | 14 | 15 | 16 |
| 2 | 2 | 3 | 4 | 5 | 4 | 5 | 6 | 6 | 7 | 8 | 8 | 9 | 9 | 10 | 10 |
| 3 | 2 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 7 | 7 |
| 4 | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **maxRunIdx** | | | | | | | | | | | | | |
| **trOne** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** | **25** | **26** | **27** | **28** |
| 0 | 6 | 7 | 8 | 7 | 8 | 8 | 9 | 10 | 10 | 10 | 12 | 10 | 9 | 8 |
| 1 | 18 | 18 | 21 | 20 | 21 | 22 | 23 | 25 | 25 | 26 | 27 | 28 | 29 | 27 |
| 2 | 11 | 11 | 12 | 13 | 14 | 15 | 16 | 16 | 17 | 18 | 19 | 20 | 19 | 19 |
| 3 | 7 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | 12 | 13 | 13 | 13 | 13 |
| 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 8 |

Table 9‑12 – Derivation of onePos from tableIdx and maxRunIdx when N is equal to 4

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **maxRunIdx** | | | | | | | | | | | | | | |
| **trOne** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** |
| 0 | 0 | 0 | 0 | 2 | 2 | 0 | 4 | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 2 |
| > 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 4 | 6 | 6 | 4 | 6 |

Table 9‑13 – Derivation of onePos from tableIdx and maxRunIdx when N is greater than 4

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **maxRunIdx** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **trOne** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** | **25** | **26** | **27** |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 4 | 4 | 8 | 0 | 4 | 4 | 4 | 8 | 4 | 4 | 8 | 8 | 8 | 8 | 12 | 12 | 4 |
| >0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 4 | 4 | 8 | 0 | 4 | 4 | 4 | 8 | 4 | 4 | 8 | 8 | 8 | 8 | 12 | 12 | 4 |

Table 9‑14 – Derivation of largeOnePos from tableIdx and maxRunIdx when N is equal to 4

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **maxRunIdx** | | | | | | | | | | | | | | |
| **trOne** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** |
| 0 | 1 | 3 | 2 | 3 | 4 | 4 | 5 | 6 | 8 | 5 | 5 | 5 | 5 | 5 | 3 |
| > 0 | 1 | 3 | 4 | 4 | 6 | 6 | 8 | 8 | 10 | 8 | 8 | 8 | 8 | 10 | 7 |

Table 9‑15 – Derivation of largeOnePos from tableIdx and maxRunIdx when N is greater than 4

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **maxRunIdx** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **trOne** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** | **25** | **26** | **27** |
| 0 | 1 | 3 | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 6 | 6 | 6 | 9 | 10 | 6 | 6 | 6 | 9 | 10 | 12 | 10 | 10 | 10 | 10 | 13 | 14 | 14 |
| >0 | 1 | 3 | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 14 | 18 | 18 | 14 | 14 | 14 | 14 | 14 | 22 | 22 |

~~Table 9‑12 – Derivation of runOfZeros from maxRun and codeNum~~

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **~~codeNum%(maxRun+1)~~** | | | | | | | | | | | | | | |
| **~~maxRun~~** | **~~0~~** | **~~1~~** | **~~2~~** | **~~3~~** | **~~4~~** | **~~5~~** | **~~6~~** | **~~7~~** | **~~8~~** | **~~9~~** | **~~10~~** | **~~11~~** | **~~12~~** | **~~13~~** | **~~14~~** |
| ~~0~~ | ~~1~~ | ~~0~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~1~~ | ~~2~~ | ~~1~~ | ~~0~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~2~~ | ~~3~~ | ~~0~~ | ~~2~~ | ~~1~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~3~~ | ~~4~~ | ~~1~~ | ~~0~~ | ~~2~~ | ~~3~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~4~~ | ~~5~~ | ~~0~~ | ~~3~~ | ~~2~~ | ~~4~~ | ~~1~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~5~~ | ~~6~~ | ~~0~~ | ~~1~~ | ~~4~~ | ~~5~~ | ~~3~~ | ~~2~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~6~~ | ~~7~~ | ~~1~~ | ~~0~~ | ~~2~~ | ~~4~~ | ~~3~~ | ~~6~~ | ~~5~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~7~~ | ~~8~~ | ~~0~~ | ~~3~~ | ~~4~~ | ~~2~~ | ~~1~~ | ~~5~~ | ~~7~~ | ~~6~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~8~~ | ~~9~~ | ~~0~~ | ~~5~~ | ~~1~~ | ~~6~~ | ~~4~~ | ~~8~~ | ~~3~~ | ~~2~~ | ~~7~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~9~~ | ~~10~~ | ~~0~~ | ~~1~~ | ~~6~~ | ~~7~~ | ~~2~~ | ~~9~~ | ~~5~~ | ~~4~~ | ~~3~~ | ~~8~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~10~~ | ~~11~~ | ~~1~~ | ~~0~~ | ~~2~~ | ~~3~~ | ~~6~~ | ~~7~~ | ~~4~~ | ~~5~~ | ~~8~~ | ~~10~~ | ~~9~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~11~~ | ~~12~~ | ~~0~~ | ~~3~~ | ~~2~~ | ~~1~~ | ~~4~~ | ~~6~~ | ~~5~~ | ~~7~~ | ~~11~~ | ~~8~~ | ~~9~~ | ~~10~~ | ~~NA~~ | ~~NA~~ |
| ~~12~~ | ~~13~~ | ~~0~~ | ~~1~~ | ~~5~~ | ~~6~~ | ~~4~~ | ~~2~~ | ~~3~~ | ~~7~~ | ~~8~~ | ~~12~~ | ~~10~~ | ~~11~~ | ~~9~~ | ~~NA~~ |
| ~~13~~ | ~~14~~ | ~~0~~ | ~~1~~ | ~~7~~ | ~~2~~ | ~~8~~ | ~~6~~ | ~~5~~ | ~~3~~ | ~~4~~ | ~~13~~ | ~~12~~ | ~~9~~ | ~~11~~ | ~~10~~ |
| ~~14~~ | ~~15~~ | ~~0~~ | ~~1~~ | ~~2~~ | ~~8~~ | ~~3~~ | ~~9~~ | ~~7~~ | ~~6~~ | ~~4~~ | ~~5~~ | ~~14~~ | ~~10~~ | ~~13~~ | ~~12~~ |
| ~~15~~ | ~~16~~ | ~~0~~ | ~~1~~ | ~~2~~ | ~~3~~ | ~~4~~ | ~~8~~ | ~~7~~ | ~~5~~ | ~~9~~ | ~~6~~ | ~~10~~ | ~~15~~ | ~~11~~ | ~~13~~ |
| ~~16~~ | ~~17~~ | ~~0~~ | ~~3~~ | ~~1~~ | ~~2~~ | ~~4~~ | ~~5~~ | ~~8~~ | ~~9~~ | ~~7~~ | ~~6~~ | ~~10~~ | ~~11~~ | ~~12~~ | ~~16~~ |
| ~~17~~ | ~~18~~ | ~~0~~ | ~~1~~ | ~~5~~ | ~~2~~ | ~~6~~ | ~~4~~ | ~~3~~ | ~~7~~ | ~~8~~ | ~~9~~ | ~~10~~ | ~~17~~ | ~~13~~ | ~~14~~ |
| ~~18~~ | ~~19~~ | ~~0~~ | ~~1~~ | ~~7~~ | ~~8~~ | ~~2~~ | ~~6~~ | ~~3~~ | ~~9~~ | ~~4~~ | ~~5~~ | ~~10~~ | ~~18~~ | ~~15~~ | ~~16~~ |
| ~~19~~ | ~~20~~ | ~~0~~ | ~~9~~ | ~~1~~ | ~~10~~ | ~~2~~ | ~~8~~ | ~~3~~ | ~~7~~ | ~~4~~ | ~~16~~ | ~~17~~ | ~~6~~ | ~~19~~ | ~~5~~ |
| ~~20~~ | ~~21~~ | ~~0~~ | ~~1~~ | ~~10~~ | ~~2~~ | ~~11~~ | ~~3~~ | ~~9~~ | ~~5~~ | ~~4~~ | ~~17~~ | ~~20~~ | ~~18~~ | ~~8~~ | ~~7~~ |
| ~~21~~ | ~~22~~ | ~~1~~ | ~~0~~ | ~~2~~ | ~~3~~ | ~~4~~ | ~~10~~ | ~~11~~ | ~~5~~ | ~~6~~ | ~~9~~ | ~~7~~ | ~~12~~ | ~~8~~ | ~~13~~ |
| ~~22~~ | ~~23~~ | ~~0~~ | ~~3~~ | ~~4~~ | ~~2~~ | ~~1~~ | ~~5~~ | ~~7~~ | ~~6~~ | ~~10~~ | ~~11~~ | ~~8~~ | ~~9~~ | ~~12~~ | ~~13~~ |
| ~~23~~ | ~~24~~ | ~~0~~ | ~~5~~ | ~~6~~ | ~~1~~ | ~~4~~ | ~~3~~ | ~~7~~ | ~~2~~ | ~~8~~ | ~~10~~ | ~~11~~ | ~~9~~ | ~~12~~ | ~~15~~ |
| ~~24~~ | ~~25~~ | ~~0~~ | ~~7~~ | ~~1~~ | ~~8~~ | ~~6~~ | ~~5~~ | ~~2~~ | ~~9~~ | ~~10~~ | ~~4~~ | ~~11~~ | ~~3~~ | ~~12~~ | ~~17~~ |
| ~~25~~ | ~~26~~ | ~~0~~ | ~~1~~ | ~~9~~ | ~~10~~ | ~~2~~ | ~~8~~ | ~~11~~ | ~~7~~ | ~~3~~ | ~~6~~ | ~~5~~ | ~~12~~ | ~~4~~ | ~~19~~ |
| ~~26~~ | ~~27~~ | ~~0~~ | ~~1~~ | ~~11~~ | ~~2~~ | ~~10~~ | ~~12~~ | ~~3~~ | ~~9~~ | ~~7~~ | ~~8~~ | ~~4~~ | ~~6~~ | ~~20~~ | ~~13~~ |
| ~~27~~ | ~~28~~ | ~~0~~ | ~~1~~ | ~~2~~ | ~~12~~ | ~~3~~ | ~~4~~ | ~~11~~ | ~~13~~ | ~~9~~ | ~~5~~ | ~~8~~ | ~~10~~ | ~~7~~ | ~~6~~ |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **~~codeNum%(maxRun+1)~~** | | | | | | | | | | | | | |
| **~~maxRun~~** | **~~15~~** | **~~16~~** | **~~17~~** | **~~18~~** | **~~19~~** | **~~20~~** | **~~21~~** | **~~22~~** | **~~23~~** | **~~24~~** | **~~25~~** | **~~26~~** | **~~27~~** | **~~28~~** |
| ~~0~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~1~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~2~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~3~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~4~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~5~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~6~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~7~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~8~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~9~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~10~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~11~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~12~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~13~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~14~~ | ~~11~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~15~~ | ~~14~~ | ~~12~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
| ~~16~~ | ~~13~~ | ~~14~~ | ~~15~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
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| ~~18~~ | ~~14~~ | ~~11~~ | ~~13~~ | ~~17~~ | ~~12~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |
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