

# Combining Diacritics

**Note:** From mPDF v6.0, support for OpenType layout (OTL) makes this section redundant if you use the OTL capability available in most fonts.

In Unicode, letters with diacritics (e.g. Á?Ä?Ä) are usually represented as a single character e.g. Unicode U+0196 is an A Umlaut. There are 4 blocks in Unicode of diacritics or 'marks' which can be used to combine with adjacent letters: Combining Diacritical Marks (U+0300 - U+036F), Combining Diacritical Marks Supplement (U+1DC0 - U+1DFF), Combining Marks for Symbols (U+20D0 - U+20FF) and Combining Half Marks (U+FE20 - U+FE2F).

Software applications use special positioning information stored in OpenType font files to reposition the diacritic/mark depending on the context. mPDF (< v 6.0) does not support this repositioning and is dependent on the font design and original placement of the diacritic:

It is recommended to use precomposed characters whenever possible with mPDF. If not you could use this quick patch to automatically combine diacritics:

In `mpdf.php` file, function `WriteHTML()`

Just after the lines:

```
$e = strcode2utf($e);
$e = $this->lessor_entity_decode($e);
```

Add this line:

```
$e = strtr($e, $this->compat);
```

Then add the following in your script (use `$this->compat` if you use it in the `config.php` file) after declaring the class `$mpdf`:

```
$mpdf->compat = array ( "A\ccc\x80"=>"\xc3\x80", "A\ccc\x81"=>"\xc3\x81",
"A\ccc\x82"=>"\xc3\x82", "A\ccc\x83"=>"\xc3\x83", "A\ccc\x88"=>"\xc3\x84",
"A\ccc\x8a"=>"\xc3\x85", "C\ccc\xa7"=>"\xc3\x87", "E\ccc\x80"=>"\xc3\x88",
"E\ccc\x81"=>"\xc3\x89", "E\ccc\x82"=>"\xc3\x8a", "E\ccc\x88"=>"\xc3\x8b",
"I\ccc\x80"=>"\xc3\x8c", "I\ccc\x81"=>"\xc3\x8d", "I\ccc\x82"=>"\xc3\x8e",
"I\ccc\x88"=>"\xc3\x8f", "N\ccc\x83"=>"\xc3\x91", "O\ccc\x80"=>"\xc3\x92",
"O\ccc\x81"=>"\xc3\x93", "O\ccc\x82"=>"\xc3\x94", "O\ccc\x83"=>"\xc3\x95",
"O\ccc\x88"=>"\xc3\x96", "U\ccc\x80"=>"\xc3\x99", "U\ccc\x81"=>"\xc3\x9a",
"U\ccc\x82"=>"\xc3\x9b", "U\ccc\x88"=>"\xc3\x9c", "Y\ccc\x81"=>"\xc3\x9d",
"a\ccc\x80"=>"\xc3\xa0", "a\ccc\x81"=>"\xc3\xa1", "a\ccc\x82"=>"\xc3\xa2",
"a\ccc\x83"=>"\xc3\xa3", "a\ccc\x88"=>"\xc3\xa4", "a\ccc\x8a"=>"\xc3\xa5",
"c\ccc\xa7"=>"\xc3\xa7", "e\ccc\x80"=>"\xc3\xa8", "e\ccc\x81"=>"\xc3\xa9",
"e\ccc\x82"=>"\xc3\xaa", "e\ccc\x88"=>"\xc3\xab", "i\ccc\x80"=>"\xc3\xac",
"i\ccc\x81"=>"\xc3\xad", "i\ccc\x82"=>"\xc3\xae", "i\ccc\x88"=>"\xc3\xaf",
"n\ccc\x83"=>"\xc3\xb1", "o\ccc\x80"=>"\xc3\xb2", "o\ccc\x81"=>"\xc3\xb3",
"o\ccc\x82"=>"\xc3\xb4", "o\ccc\x83"=>"\xc3\xb5", "o\ccc\x88"=>"\xc3\xb6",
"u\ccc\x80"=>"\xc3\xb9", "u\ccc\x81"=>"\xc3\xba", "u\ccc\x82"=>"\xc3\xbb",
"u\ccc\x88"=>"\xc3\xbc", "y\ccc\x81"=>"\xc3\xbd", "y\ccc\x88"=>"\xc3\xbf",
"A\ccc\x84"=>"\xc4\x80", "a\ccc\x84"=>"\xc4\x81", "A\ccc\x86"=>"\xc4\x82",
"a\ccc\x86"=>"\xc4\x83", "A\ccc\x81"=>"\xc4\x84", "a\ccc\x81"=>"\xc4\x85",
"C\ccc\x81"=>"\xc4\x86", "C\ccc\x81"=>"\xc4\x87", "C\ccc\x82"=>"\xc4\x88",
"C\ccc\x82"=>"\xc4\x89", "C\ccc\x87"=>"\xc4\x8a", "C\ccc\x87"=>"\xc4\x8b",
"C\ccc\x8c"=>"\xc4\x8c", "C\ccc\x8c"=>"\xc4\x8d", "D\ccc\x8c"=>"\xc4\x8e",
"d\ccc\x8c"=>"\xc4\x8f", "E\ccc\x84"=>"\xc4\x92", "e\ccc\x84"=>"\xc4\x93",
"E\ccc\x86"=>"\xc4\x94", "e\ccc\x86"=>"\xc4\x95", "E\ccc\x87"=>"\xc4\x96",
"e\ccc\x87"=>"\xc4\x97", "E\ccc\x8a"=>"\xc4\x98", "e\ccc\x8a"=>"\xc4\x99",
"E\ccc\x8c"=>"\xc4\x9a", "e\ccc\x8c"=>"\xc4\x9b", "G\ccc\x82"=>"\xc4\x9c",
"g\ccc\x82"=>"\xc4\x9d", "G\ccc\x86"=>"\xc4\x9e", "g\ccc\x86"=>"\xc4\x9f",
"G\ccc\x87"=>"\xc4\xa0", "g\ccc\x87"=>"\xc4\xa1", "G\ccc\xa7"=>"\xc4\xa2",
"g\ccc\xa7"=>"\xc4\xa3", "H\ccc\x82"=>"\xc4\xa4", "h\ccc\x82"=>"\xc4\xa5",
"I\ccc\x83"=>"\xc4\xa8", "i\ccc\x83"=>"\xc4\xa9", "I\ccc\x84"=>"\xc4\xaa",
"i\ccc\x84"=>"\xc4\xab", "I\ccc\x86"=>"\xc4\xac", "i\ccc\x86"=>"\xc4\xad",
"I\ccc\xa8"=>"\xc4\xae", "i\ccc\xa8"=>"\xc4\xaf", "I\ccc\x87"=>"\xc4\xb0",
"J\ccc\x82"=>"\xc4\xb4", "j\ccc\x82"=>"\xc4\xb5", "K\ccc\xa7"=>"\xc4\xb6",
"k\ccc\xa7"=>"\xc4\xb7", "L\ccc\x81"=>"\xc4\xb9", "l\ccc\x81"=>"\xc4\xba",
"L\ccc\xa7"=>"\xc4\xbb", "l\ccc\xa7"=>"\xc4\xbc", "L\ccc\x8c"=>"\xc4\xbd",
"l\ccc\x8c"=>"\xc4\xbe", "N\ccc\x81"=>"\xc5\x83", "n\ccc\x81"=>"\xc5\x84",
"N\ccc\xa7"=>"\xc5\x85", "n\ccc\xa7"=>"\xc5\x86", "N\ccc\x8c"=>"\xc5\x87",
"n\ccc\x8c"=>"\xc5\x88", "O\ccc\x84"=>"\xc5\x8c", "o\ccc\x84"=>"\xc5\x8d",
"O\ccc\x86"=>"\xc5\x8e", "o\ccc\x86"=>"\xc5\x8f", "O\ccc\x8b"=>"\xc5\x90",
"o\ccc\x8b"=>"\xc5\x91", "R\ccc\x81"=>"\xc5\x94", "r\ccc\x81"=>"\xc5\x95",
"R\ccc\xa7"=>"\xc5\x96", "r\ccc\xa7"=>"\xc5\x97", "R\ccc\x8c"=>"\xc5\x98",
"r\ccc\x8c"=>"\xc5\x99", "S\ccc\x81"=>"\xc5\x9a", "s\ccc\x81"=>"\xc5\x9b",
"S\ccc\x82"=>"\xc5\x9c", "s\ccc\x82"=>"\xc5\x9d", "S\ccc\xa7"=>"\xc5\x9e",
"s\ccc\xa7"=>"\xc5\x9f", "S\ccc\x8c"=>"\xc5\xa0", "s\ccc\x8c"=>"\xc5\xa1",
"T\ccc\xa7"=>"\xc5\xa2", "t\ccc\xa7"=>"\xc5\xa3", "T\ccc\x8c"=>"\xc5\xa4",
"t\ccc\x8c"=>"\xc5\xa5", "U\ccc\x83"=>"\xc5\xa8", "u\ccc\x83"=>"\xc5\xa9",
"U\ccc\x84"=>"\xc5\xaa", "u\ccc\x84"=>"\xc5\xab", "U\ccc\x86"=>"\xc5\xac",
"u\ccc\x86"=>"\xc5\xad", "U\ccc\xa8"=>"\xc5\xae", "u\ccc\xa8"=>"\xc5\xaf",
"U\ccc\x8b"=>"\xc5\xb0", "u\ccc\x8b"=>"\xc5\xb1", "U\ccc\xa8"=>"\xc5\xb2",
"u\ccc\xa8"=>"\xc5\xb3", "W\ccc\x82"=>"\xc5\xb4", "w\ccc\x82"=>"\xc5\xb5",
"Y\ccc\x82"=>"\xc5\xb6", "y\ccc\x82"=>"\xc5\xb7", "Y\ccc\x88"=>"\xc5\xb8",
"Z\ccc\x81"=>"\xc5\xb9", "z\ccc\x81"=>"\xc5\xba", "Z\ccc\x87"=>"\xc5\xbb",
"z\ccc\x87"=>"\xc5\xbc", "Z\ccc\x8c"=>"\xc5\xbd", "z\ccc\x8c"=>"\xc5\xbe",
```

2

```
"W\\xcc\\x80"=="\\x01\\xba\\x81", "W\\xcc\\x81"=="\\x01\\xba\\x82", "w\\xcc\\x81"=="\\x01\\xba\\x83",
"W\\xcc\\x88"=="\\x01\\xba\\x84", "w\\xcc\\x88"=="\\x01\\xba\\x85", "W\\xcc\\x87"=="\\x01\\xba\\x86",
"w\\xcc\\x87"=="\\x01\\xba\\x87", "W\\xcc\\x83"=="\\x01\\xba\\x88", "w\\xcc\\x83"=="\\x01\\xba\\x89",
"X\\xcc\\x87"=="\\x01\\xba\\x8a", "x\\xcc\\x87"=="\\x01\\xba\\x8b", "X\\xcc\\x88"=="\\x01\\xba\\x8c",
"x\\xcc\\x88"=="\\x01\\xba\\x8d", "Y\\xcc\\x87"=="\\x01\\xba\\x8e", "y\\xcc\\x87"=="\\x01\\xba\\x8f",
"Z\\xcc\\x82"=="\\x01\\xba\\x90", "z\\xcc\\x82"=="\\x01\\xba\\x91", "Z\\xcc\\xa3"=="\\x01\\xba\\x92",
"z\\xcc\\xa3"=="\\x01\\xba\\x93", "Z\\xcc\\xb1"=="\\x01\\xba\\x94", "z\\xcc\\xb1"=="\\x01\\xba\\x95",
"h\\xcc\\xb1"=="\\x01\\xba\\x96", "t\\xcc\\x88"=="\\x01\\xba\\x97", "w\\xcc\\x8a"=="\\x01\\xba\\x98",
"y\\xcc\\x8a"=="\\x01\\xba\\x99", "x5\\xbf\\xcc\\x87"=="\\x01\\xba\\x9b", "A\\xcc\\xa3"=="\\x01\\xba\\xa0",
"a\\xcc\\xa3"=="\\x01\\xba\\xa1", "A\\xcc\\x89"=="\\x01\\xba\\xa2", "a\\xcc\\x89"=="\\x01\\xba\\xa3",
"\\xc3\\x82\\xcc\\x81"=="\\x01\\xba\\xa4", "\\xc3\\xa2\\xcc\\x81"=="\\x01\\xba\\xa5",
"\\xc3\\x82\\xcc\\x80"=="\\x01\\xba\\xa6", "\\xc3\\xa2\\xcc\\x80"=="\\x01\\xba\\xa7",
"\\xc3\\x82\\xcc\\x89"=="\\x01\\xba\\xa8", "\\xc3\\xa2\\xcc\\x89"=="\\x01\\xba\\xa9",
"\\xc3\\x82\\xcc\\x83"=="\\x01\\xba\\xaa", "\\xc3\\xa2\\xcc\\x83"=="\\x01\\xba\\xab",
"\\x01\\xba\\xa0\\xcc\\x82"=="\\x01\\xba\\xac", "\\x01\\xba\\xa1\\xcc\\x82"=="\\x01\\xba\\xad",
"\\xc4\\x82\\xcc\\x81"=="\\x01\\xba\\xae", "\\xc4\\x83\\xcc\\x81"=="\\x01\\xba\\xaf",
"\\xc4\\x82\\xcc\\x80"=="\\x01\\xba\\xb0", "\\xc4\\x83\\xcc\\x80"=="\\x01\\xba\\xb1",
"\\xc4\\x82\\xcc\\x89"=="\\x01\\xba\\xb2", "\\xc4\\x83\\xcc\\x89"=="\\x01\\xba\\xb3",
"\\xc4\\x82\\xcc\\x83"=="\\x01\\xba\\xb4", "\\xc4\\x83\\xcc\\x83"=="\\x01\\xba\\xb5",
"\\x01\\xba\\xa0\\xcc\\x86"=="\\x01\\xba\\xb6", "\\x01\\xba\\xa1\\xcc\\x86"=="\\x01\\xba\\xb7",
"E\\xcc\\xa3"=="\\x01\\xba\\xb8", "e\\xcc\\xa3"=="\\x01\\xba\\xb9", "E\\xcc\\x89"=="\\x01\\xba\\xba",
"e\\xcc\\x89"=="\\x01\\xba\\xbb", "E\\xcc\\x83"=="\\x01\\xba\\xbc", "e\\xcc\\x83"=="\\x01\\xba\\xbd",
"\\xc3\\x8a\\xcc\\x81"=="\\x01\\xba\\xbe", "\\xc3\\xaa\\xcc\\x81"=="\\x01\\xba\\xbf",
"\\xc3\\x8a\\xcc\\x80"=="\\x01\\xbb\\x80", "\\xc3\\xaa\\xcc\\x80"=="\\x01\\xbb\\x81",
"\\xc3\\x8a\\xcc\\x89"=="\\x01\\xbb\\x82", "\\xc3\\xaa\\xcc\\x89"=="\\x01\\xbb\\x83",
"\\xc3\\x8a\\xcc\\x83"=="\\x01\\xbb\\x84", "\\xc3\\xaa\\xcc\\x83"=="\\x01\\xbb\\x85",
"\\x01\\xba\\xb8\\xcc\\x82"=="\\x01\\xbb\\x86", "\\x01\\xba\\xb9\\xcc\\x82"=="\\x01\\xbb\\x87",
"I\\xcc\\x89"=="\\x01\\xbb\\x88", "i\\xcc\\x89"=="\\x01\\xbb\\x89", "I\\xcc\\xa3"=="\\x01\\xbb\\x8a",
"i\\xcc\\xa3"=="\\x01\\xbb\\x8b", "O\\xcc\\xa3"=="\\x01\\xbb\\x8c", "o\\xcc\\xa3"=="\\x01\\xbb\\x8d",
"O\\xcc\\x89"=="\\x01\\xbb\\x8e", "o\\xcc\\x89"=="\\x01\\xbb\\x8f", "\\xc3\\x94\\xcc\\x81"=="\\x01\\xbb\\x90",
"\\xc3\\xb4\\xcc\\x81"=="\\x01\\xbb\\x91", "\\xc3\\x94\\xcc\\x80"=="\\x01\\xbb\\x92",
"\\xc3\\xb4\\xcc\\x80"=="\\x01\\xbb\\x93", "\\xc3\\x94\\xcc\\x89"=="\\x01\\xbb\\x94",
"\\xc3\\xb4\\xcc\\x89"=="\\x01\\xbb\\x95", "\\xc3\\x94\\xcc\\x83"=="\\x01\\xbb\\x96",
"\\xc3\\xb4\\xcc\\x83"=="\\x01\\xbb\\x97", "\\x01\\xbb\\x8c\\xcc\\x82"=="\\x01\\xbb\\x98",
"\\x01\\xbb\\x8d\\xcc\\x82"=="\\x01\\xbb\\x99", "\\xc6\\xa0\\xcc\\x81"=="\\x01\\xbb\\x9a",
"\\xc6\\xa1\\xcc\\x81"=="\\x01\\xbb\\x9b", "\\xc6\\xa0\\xcc\\x80"=="\\x01\\xbb\\x9c",
"\\xc6\\xa1\\xcc\\x80"=="\\x01\\xbb\\x9d", "\\xc6\\xa0\\xcc\\x89"=="\\x01\\xbb\\x9e",
"\\xc6\\xa1\\xcc\\x89"=="\\x01\\xbb\\x9f", "\\xc6\\xa0\\xcc\\x83"=="\\x01\\xbb\\xa0",
"\\xc6\\xa1\\xcc\\x83"=="\\x01\\xbb\\xa1", "\\xc6\\xa0\\xcc\\xa3"=="\\x01\\xbb\\xa2",
"\\xc6\\xa1\\xcc\\xa3"=="\\x01\\xbb\\xa3", "U\\xcc\\xa3"=="\\x01\\xbb\\xa4", "u\\xcc\\xa3"=="\\x01\\xbb\\xa5",
"U\\xcc\\x89"=="\\x01\\xbb\\xa6", "u\\xcc\\x89"=="\\x01\\xbb\\xa7", "\\xc6\\xaf\\xcc\\x81"=="\\x01\\xbb\\xa8",
"\\xc6\\xb0\\xcc\\x81"=="\\x01\\xbb\\xa9", "\\xc6\\xaf\\xcc\\x80"=="\\x01\\xbb\\xaa",
"\\xc6\\xb0\\xcc\\x80"=="\\x01\\xbb\\xab", "\\xc6\\xaf\\xcc\\x89"=="\\x01\\xbb\\xac",
"\\xc6\\xb0\\xcc\\x89"=="\\x01\\xbb\\xad", "\\xc6\\xaf\\xcc\\x83"=="\\x01\\xbb\\xae",
"\\xc6\\xb0\\xcc\\x83"=="\\x01\\xbb\\xaf", "\\xc6\\xaf\\xcc\\xa3"=="\\x01\\xbb\\xb0",
"\\xc6\\xb0\\xcc\\xa3"=="\\x01\\xbb\\xb1", "Y\\xcc\\x80"=="\\x01\\xbb\\xb2", "y\\xcc\\x80"=="\\x01\\xbb\\xb3",
"Y\\xcc\\xa3"=="\\x01\\xbb\\xb4", "y\\xcc\\xa3"=="\\x01\\xbb\\xb5", "Y\\xcc\\x89"=="\\x01\\xbb\\xb6",
"y\\xcc\\x89"=="\\x01\\xbb\\xb7", "Y\\xcc\\x83"=="\\x01\\xbb\\xb8", "y\\xcc\\x83"=="\\x01\\xbb\\xb9",
"\\xce\\xb1\\xcc\\x93"=="\\x01\\xbc\\x80", "\\xce\\xb1\\xcc\\x94"=="\\x01\\xbc\\x81",
"\\x01\\xbc\\x80\\xcc\\x80"=="\\x01\\xbc\\x82", "\\x01\\xbc\\x81\\xcc\\x80"=="\\x01\\xbc\\x83",
"\\x01\\xbc\\x80\\xcc\\x81"=="\\x01\\xbc\\x84", "\\x01\\xbc\\x81\\xcc\\x81"=="\\x01\\xbc\\x85",
"\\x01\\xbc\\x80\\xcd\\x82"=="\\x01\\xbc\\x86", "\\x01\\xbc\\x81\\xcd\\x82"=="\\x01\\xbc\\x87",
"\\xce\\x91\\xcc\\x93"=="\\x01\\xbc\\x88", "\\xce\\x91\\xcc\\x94"=="\\x01\\xbc\\x89",
"\\x01\\xbc\\x88\\xcc\\x80"=="\\x01\\xbc\\x8a", "\\x01\\xbc\\x89\\xcc\\x80"=="\\x01\\xbc\\x8b",
"\\x01\\xbc\\x88\\xcc\\x81"=="\\x01\\xbc\\x8c", "\\x01\\xbc\\x89\\xcc\\x81"=="\\x01\\xbc\\x8d",
"\\x01\\xbc\\x88\\xcd\\x82"=="\\x01\\xbc\\x8e", "\\x01\\xbc\\x89\\xcd\\x82"=="\\x01\\xbc\\x8f",
"\\xce\\xb5\\xcc\\x93"=="\\x01\\xbc\\x90", "\\xce\\xb5\\xcc\\x94"=="\\x01\\xbc\\x91",
"\\x01\\xbc\\x90\\xcc\\x80"=="\\x01\\xbc\\x92", "\\x01\\xbc\\x91\\xcc\\x80"=="\\x01\\xbc\\x93",
"\\x01\\xbc\\x90\\xcc\\x81"=="\\x01\\xbc\\x94", "\\x01\\xbc\\x91\\xcc\\x81"=="\\x01\\xbc\\x95",
"\\xce\\x95\\xcc\\x93"=="\\x01\\xbc\\x98", "\\xce\\x95\\xcc\\x94"=="\\x01\\xbc\\x99",
"\\x01\\xbc\\x98\\xcc\\x80"=="\\x01\\xbc\\x9a", "\\x01\\xbc\\x99\\xcc\\x80"=="\\x01\\xbc\\x9b",
"\\x01\\xbc\\x98\\xcc\\x81"=="\\x01\\xbc\\x9c", "\\x01\\xbc\\x99\\xcc\\x81"=="\\x01\\xbc\\x9d",
"\\xce\\xb7\\xcc\\x93"=="\\x01\\xbc\\xa0", "\\xce\\xb7\\xcc\\x94"=="\\x01\\xbc\\xa1",
"\\x01\\xbc\\xa0\\xcc\\x80"=="\\x01\\xbc\\xa2", "\\x01\\xbc\\xa1\\xcc\\x80"=="\\x01\\xbc\\xa3",
"\\x01\\xbc\\xa0\\xcd\\x81"=="\\x01\\xbc\\xa4", "\\x01\\xbc\\xa1\\xcd\\x81"=="\\x01\\xbc\\xa5",
"\\x01\\xbc\\xa0\\xcd\\x82"=="\\x01\\xbc\\xa6", "\\x01\\xbc\\xa1\\xcd\\x82"=="\\x01\\xbc\\xa7",
"\\xce\\x97\\xcc\\x93"=="\\x01\\xbc\\xa8", "\\xce\\x97\\xcc\\x94"=="\\x01\\xbc\\xa9",
"\\x01\\xbc\\xa8\\xcc\\x80"=="\\x01\\xbc\\xaa", "\\x01\\xbc\\xa9\\xcc\\x80"=="\\x01\\xbc\\xab",
"\\x01\\xbc\\xa8\\xcc\\x81"=="\\x01\\xbc\\xac", "\\x01\\xbc\\xa9\\xcc\\x81"=="\\x01\\xbc\\xad",
"\\x01\\xbc\\xa8\\xcd\\x82"=="\\x01\\xbc\\xae", "\\x01\\xbc\\xa9\\xcd\\x82"=="\\x01\\xbc\\xaf",
"\\xce\\xb9\\xcc\\x93"=="\\x01\\xbc\\xb0", "\\xce\\xb9\\xcc\\x94"=="\\x01\\xbc\\xb1",
"\\x01\\xbc\\xb0\\xcc\\x80"=="\\x01\\xbc\\xb2", "\\x01\\xbc\\xb1\\xcc\\x80"=="\\x01\\xbc\\xb3",
"\\x01\\xbc\\xb0\\xcd\\x81"=="\\x01\\xbc\\xb4", "\\x01\\xbc\\xb1\\xcd\\x81"=="\\x01\\xbc\\xb5",
"\\x01\\xbc\\xb0\\xcd\\
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"\x01\xbc\x83\xcd\x85"=="\x01\xbe\x83", "\x01\xbc\x84\xcd\x85"=="\x01\xbe\x84",
"\x01\xbc\x85\xcd\x85"=="\x01\xbe\x85", "\x01\xbc\x86\xcd\x85"=="\x01\xbe\x86",
"\x01\xbc\x87\xcd\x85"=="\x01\xbe\x87", "\x01\xbc\x88\xcd\x85"=="\x01\xbe\x88",
"\x01\xbc\x89\xcd\x85"=="\x01\xbe\x89", "\x01\xbc\x8a\xcd\x85"=="\x01\xbe\x8a",
"\x01\xbc\x8b\xcd\x85"=="\x01\xbe\x8b", "\x01\xbc\x8c\xcd\x85"=="\x01\xbe\x8c",
"\x01\xbc\x8d\xcd\x85"=="\x01\xbe\x8d", "\x01\xbc\x8e\xcd\x85"=="\x01\xbe\x8e",
"\x01\xbc\x8f\xcd\x85"=="\x01\xbe\x8f", "\x01\xbc\xa0\xcd\x85"=="\x01\xbe\x90",
"\x01\xbc\xa1\xcd\x85"=="\x01\xbe\x91", "\x01\xbc\xa2\xcd\x85"=="\x01\xbe\x92",
"\x01\xbc\xa3\xcd\x85"=="\x01\xbe\x93", "\x01\xbc\xa4\xcd\x85"=="\x01\xbe\x94",
"\x01\xbc\xa5\xcd\x85"=="\x01\xbe\x95", "\x01\xbc\xa6\xcd\x85"=="\x01\xbe\x96",
"\x01\xbc\xa7\xcd\x85"=="\x01\xbe\x97", "\x01\xbc\xa8\xcd\x85"=="\x01\xbe\x98",
"\x01\xbc\xa9\xcd\x85"=="\x01\xbe\x99", "\x01\xbc\xaa\xcd\x85"=="\x01\xbe\x9a",
"\x01\xbc\xab\xcd\x85"=="\x01\xbe\x9b", "\x01\xbc\xac\xcd\x85"=="\x01\xbe\x9c",
"\x01\xbc\xad\xcd\x85"=="\x01\xbe\x9d", "\x01\xbc\xae\xcd\x85"=="\x01\xbe\x9e",
"\x01\xbc\xaf\xcd\x85"=="\x01\xbe\x9f", "\x01\xbd\xa0\xcd\x85"=="\x01\xbe\xa0",
"\x01\xbd\xa1\xcd\x85"=="\x01\xbe\xa1", "\x01\xbd\xa2\xcd\x85"=="\x01\xbe\xa2",
"\x01\xbd\xa3\xcd\x85"=="\x01\xbe\xa3", "\x01\xbd\xa4\xcd\x85"=="\x01\xbe\xa4",
"\x01\xbd\xa5\xcd\x85"=="\x01\xbe\xa5", "\x01\xbd\xa6\xcd\x85"=="\x01\xbe\xa6",
"\x01\xbd\xa7\xcd\x85"=="\x01\xbe\xa7", "\x01\xbd\xa8\xcd\x85"=="\x01\xbe\xa8",
"\x01\xbd\xa9\xcd\x85"=="\x01\xbe\xa9", "\x01\xbd\xaa\xcd\x85"=="\x01\xbe\xaa",
"\x01\xbd\xab\xcd\x85"=="\x01\xbe\xab", "\x01\xbd\xac\xcd\x85"=="\x01\xbe\xac",
"\x01\xbd\xad\xcd\x85"=="\x01\xbe\xad", "\x01\xbd\xae\xcd\x85"=="\x01\xbe\xae",
"\x01\xbd\xaf\xcd\x85"=="\x01\xbe\xaf", "\xcce\xb1\xcc\x85"=="\x01\xbe\xb0",
"\xcce\xb1\xcc\x84"=="\x01\xbe\xb1", "\x01\xbd\xb0\xcd\x85"=="\x01\xbe\xb2",
"\xcce\xb1\xcd\x85"=="\x01\xbe\xb3", "\xcce\xba\xcd\x85"=="\x01\xbe\xb4",
"\xcce\xb1\xcd\x82"=="\x01\xbe\xb6", "\x01\xbe\b6\xcd\x85"=="\x01\xbe\b7",
"\xcce\x91\xcc\x86"=="\x01\xbe\b8", "\xcce\x91\xcc\x84"=="\x01\xbe\b9",
"\xcce\x91\xcc\x80"=="\x01\xbe\b9a", "\xcce\x91\xcd\x85"=="\x01\xbe\b9c",
"\xc2\xa8\xcd\x82"=="\x01\xbf\b81", "\x01\xbd\b4\xcd\x85"=="\x01\xbf\b82",
"\xcce\xbb\xcd\x85"=="\x01\xbf\b83", "\xcce\xae\xcd\x85"=="\x01\xbf\b84",
"\xcce\xbb\xcd\x82"=="\x01\xbf\b86", "\x01\xbf\b86\xcd\x85"=="\x01\xbf\b87",
"\xcce\x95\xcc\x80"=="\x01\xbf\b88", "\xcce\x97\xcc\x80"=="\x01\xbf\b8a",
"\xcce\x97\xcd\x85"=="\x01\xbf\b8c", "\x01\xbe\b9\xcc\x80"=="\x01\xbf\b8d",
"\x01\xbe\b9\xcc\x81"=="\x01\xbf\b8e", "\x01\xbe\b9\xcd\x82"=="\x01\xbf\b8f",
"\xcce\xbb\xcc\x86"=="\x01\xbf\b90", "\xcce\xbb\xcc\x84"=="\x01\xbf\b91",
"\xcf\x8a\xcc\x80"=="\x01\xbf\b92", "\xcce\xbb\xcd\x82"=="\x01\xbf\b96",
"\xcf\x8a\xcd\x82"=="\x01\xbf\b97", "\xcce\x99\xcc\x86"=="\x01\xbf\b98",
"\xcce\x99\xcc\x84"=="\x01\xbf\b99", "\xcce\x99\xcc\x80"=="\x01\xbf\b9a",
"\x01\xbf\b9\xcc\x80"=="\x01\xbf\b9d", "\x01\xbf\b9\xcc\x81"=="\x01\xbf\b9e",
"\x01\xbf\b9\xcd\x82"=="\x01\xbf\b9f", "\xcf\x85\xcc\x86"=="\x01\xbf\b90",
"\xcf\x85\xcc\x84"=="\x01\xbf\b91", "\xcf\x8b\xcc\x80"=="\x01\xbf\b92",
"\xcf\x81\xcc\x93"=="\x01\xbf\b94", "\xcf\x81\xcc\x94"=="\x01\xbf\b95",
"\xcf\x85\xcd\x82"=="\x01\xbf\b96", "\xcf\x8b\xcd\x82"=="\x01\xbf\b97",
"\xcce\xa5\xcc\x86"=="\x01\xbf\b98", "\xcce\xa5\xcc\x84"=="\x01\xbf\b99",
"\xcce\xa5\xcc\x80"=="\x01\xbf\b9a", "\xcce\xa1\xcc\x94"=="\x01\xbf\b9c",
"\xc2\xa8\xcc\x80"=="\x01\xbf\b9d", "\x01\xbd\b9\xcd\x85"=="\x01\xbf\b9e",
"\xcf\x89\xcd\x85"=="\x01\xbf\b9b", "\xcf\x8e\xcd\x85"=="\x01\xbf\b9d",
"\xcf\x89\xcd\x82"=="\x01\xbf\b96", "\x01\xbf\b96\xcd\x85"=="\x01\xbf\b97",
"\xcce\x9f\xcc\x80"=="\x01\xbf\b98", "\xcce\xa9\xcc\x80"=="\x01\xbf\b9a",
"\xcce\xa9\xcd\x85"=="\x01\xbf\b9c");
```