N.B.: this quick reference is just that - some of the explanations have been simplified. For the authoritative documentation, see the latest edition of Programming Perl or perldoc perlre.

**Specific characters:**

- `\t` A tab character
- `\n` A newline character (OS neutral)
- `\r` A carriage return character
- `\f` A form feed character
- `\cX` Control character `CTRL-X`
- `\NNN` Octal code for character `NNN`

**Metacharacters:**

The following 12 characters need to be escaped with a backslash - `\` - because by default, they mean something special.

- `\ | ( ) \[ { ^ $ * + ? .`
- `-` Match any one character (except `\n`)
- `|` Alternation
- `(` Group and capture
- `)` Define character class
- `\` Modify the meaning of the next char.

**Anchors:**

- `^` Match at the beginning of a string (or line)
- `$` Match at the end of a string (or line)
- `\b` Match at a ‘word’ boundary
- `\B` Match at not a ‘word’ boundary

These are also known as zero width assertions.

**Quantifiers:**

These quantifiers apply to the preceding atom.

- `*` Match 0 or more times
- `+` Match 1 or more times
- `?` Match 0 or 1 times
- `{N}` Match exactly `N` times
- `{N,}` Match at least `N` times
- `{N,M}` Match at least `N` but not more than `M` times

By default, quantifiers are “greedy”. They attempt to match as many characters as possible. In order to make them match as few characters as possible, follow them with a question mark “?.”

**Character class metacharacters:**

- `^` If the first character of a class, negates that class
- `-` Unless first or last character of a class, used for a range

**Character class shortcuts:**

- `\d [0-9]` A digit
- `\D[^0-9]` A non-digit
- `\s [\t\n\r\f]` A whitespace char.
- `\S [^\t\n\r\f]` A non-whitespace char.
- `\w [a-zA-Z0-9_]` A ‘word’ char.
- `\W[^a-zA-Z0-9_]` A ‘non-word’ char.

These shortcuts can be used either on their own, or within a character class.

**Modifiers:**

These modifiers apply to the entire pattern

- `/i` Ignore case
- `/g` Match globally (all)
- `/m` Let `^` and `$` match next to embedded `\n`
- `/s` Let `.` match `\n`
- `/x` Ignore most whitespace and allow comments
- `/e` Evaluate right hand side of `s///` as an expression

All except `/e` apply to both `m//` and `s///`.

**Metaquote & case translations:**

- `\Q` Quote (de-meta) characters until `\E`
- `\U` Uppercase characters until `\E`
- `\L` Lowercase characters until `\E`

**Special variables:**

- `$^` The characters to the left of the match
- `$&` The characters that matched
- `$^` The characters to the right of the match
- `$N` The characters captured by the `N`th set of parentheses (if on the match side)
- `$N` The characters captured by the `N`th set of parentheses (if not on the match side)

**Binding operators:**

- `=~` True if the regex matches
- `!~` True if the regex doesn’t match

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