/* C++ */

Using the book's RE notation (a a character, A, B REs, Π a subset of the alphabet Σ, ...), ie:

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write a regular expression for C/C++ multiline comments that begin with /*, end with */ and may contain *s and /s.

Hint: for clarity let $\alpha = *$ so that it may be distinguished from the RE Kleene operator.

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Let $\alpha = $ * $\Pi = \Sigma - \{/, \, \alpha\}$ (everything but / and *)

$$/\alpha \, (/|\Pi|\alpha^+\Pi) * \alpha^+ /$$

/* C/C++ */

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Begins with /* $\quad /\alpha$
The middle does not contain */ $\quad (/|\Pi|\alpha^+\Pi)*$
Ends with */ $\quad \alpha^+/$

The middle can be thought of as **either**:

▶ a sequence of characters not containing a */ **or**

▶ a sequence of characters that does not end with */