5 Solve the following equations.

(a) $\log_2 x^2 + \log_{16} x = 18$ [4]

(b) $e^{2x+1} - 10e^{-2x-1} = 3$ [4]

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6 DO NOT USE A CALCULATOR IN THIS QUESTION.

Write $(5-\sqrt{3})(\sqrt{6}+\sqrt{2})^{-2}$ in the form $a+b\sqrt{3}$, where a and b are constants. [5]

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