

# Calculus 1B - Answers to SSS exercises, week 6

## 1. 1.1 -

(Show that Equation (1) is true when you replace  $y$  by  $c_1 e^{-x}$  or by  $c_2 e^{-4x}$ , respectively.)

## 1.2 -

(Show that Equation (1) is true when you replace  $y$  by  $c_1 e^{-x} + c_2 e^{-4x}$ .)

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2.  $y = -e^{-x} + e^{-2x}$

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3. 3.1  $y = c_1 \cos 2x + c_2 \sin 2x + \frac{1}{3} \sin x$

3.2  $y = c_1 e^x + c_2 e^{-x} - x$

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4.  $y = c_1 e^x + c_2 e^{-x} + \frac{1}{2} x e^x - x^2 - 2$