

$$\begin{aligned}
 a) \quad y &= 5x^2 + 2 \cdot e^{3x} \\
 y' &= 10x + 2 \cdot e^{3x} \cdot 3 \\
 &= 10x + 6e^{3x}
 \end{aligned}$$

$$\begin{aligned}
 b) \quad y &= 3x + 5 \cdot e^{-2x} \\
 y' &= 3 + 5 \cdot e^{-2x} \cdot (-2) \\
 &= 3 - 10e^{-2x}
 \end{aligned}$$

$$\begin{aligned}
 c) \quad y &= e^x - e^{-x} \\
 y' &= e^x - (-e^{-x}) \\
 &= e^x + e^{-x}
 \end{aligned}$$

$$\begin{aligned}
 d) \quad y &= 3x + 5 \cdot e^{-2x} \\
 y' &= 3 + 5 \cdot e^{-2x} \cdot (-2) \\
 &= 3 - 10e^{-2x}
 \end{aligned}$$