Nr. 1.) a) $F(x) = 2 + e^x \Rightarrow F'(x) = e^x$

b) $F(x) = 2x + e^x \Rightarrow F'(x) = 2 + e^x$

c) $F(x) = e^{7x} \Rightarrow F'(x) = e^{7x} \cdot 7 = 7 \cdot e^{7x}$

d) $F(x) = e^{2x} \Rightarrow F'(x) = e^{2x} \cdot 2 = 2 \cdot e^{2x}$

e) $F(x) = 4 \cdot e^{3x} \Rightarrow F'(x) = 4 \cdot e^{3x} \cdot 3 = 12 \cdot e^{3x}$

f) $F(x) = \frac{1}{2} \cdot e^{4x} \Rightarrow F'(x) = \frac{1}{2} \cdot e^{4x} \cdot 4 = 2 \cdot e^{4x}$

g) $F(x) = 2 \cdot e^{x+1} \Rightarrow F'(x) = 2 \cdot e^{x+1} \cdot 1 = 2 \cdot e^{x+1}$

h) $F(x) = \frac{1}{3} \cdot e^{-3x} \Rightarrow F'(x) = \frac{1}{3} \cdot e^{-3x} \cdot (-3) = -1 \cdot e^{-3x}$

i) $F(x) = x^2 + e^{0,5x} \Rightarrow F'(x) = 2x + e^{0,5 \cdot x} \cdot \frac{1}{2} = 2x + \frac{1}{2} \cdot e^{\frac{1}{2}x}$

j) $F(x) = -\frac{4}{10} \cdot e^{-5x} \Rightarrow F'(x) = -\frac{4}{10} \cdot e^{-5x} \cdot (-5) = 2 \cdot e^{-5x}$

k) $F(x) = 3 \cdot e^{2x+1} \Rightarrow F'(x) = 3 \cdot e^{2x+1} \cdot (2) = 6 \cdot e^{2x+1}$

l) $F(x) = 5 \cdot e^{-3x-2} \Rightarrow F'(x) = 5 \cdot e^{-3x-2} \cdot (-3) = -15 \cdot e^{-3x-2}$

Nr. 2.) a) $F(x) = x \cdot e^x \Rightarrow F'(x) = 1 \cdot e^x + x \cdot e^x = e^x(1+x)$

b) $F(x) = (x-3) \cdot e^x \Rightarrow F'(x) = 1 \cdot e^x + (x-3) \cdot e^x = e^x(x-2)$

c) $F(x) = x^2 \cdot e^x \Rightarrow f'(x) = 2x \cdot e^x + x^2 \cdot e^x = e^x(2x + x^2)$

$= e^x \cdot x \cdot (2 + x)$

d) $F(x) = 3x \cdot e^x - 2e^x \Rightarrow F'(x) = 3 \cdot e^x + 3x \cdot e^x - 2e^x$

$F'(x) = e^x(3 + 3x - 2) = e^x(3x + 1)$