

$$3. f(x) = 5x - 1 \Rightarrow f'(x) = 5 - 0 = 5$$

$$4. F(x) = -4x^{10} \Rightarrow F'(x) = -4(10x^{10-1}) = -40x^9$$

$$5. f(x) = 9x^4 - 3x^2 + 8 \Rightarrow f'(x) = 9(4x^{4-1}) - 3(2x^{2-1}) + 0 = 36x^3 - 6x$$

$$6. g(x) = 5x^8 - 2x^5 + 6 \Rightarrow g'(x) = 5(8x^{8-1}) - 2(5x^{5-1}) + 0 = 40x^7 - 10x^4$$

$$7. y = x^{-2/5} \Rightarrow y' = -\frac{2}{5}x^{(-2/5)-1} = -\frac{2}{5}x^{-7/5} = -\frac{2}{5x^{7/5}}$$

$$8. y = 5e^x + 3 \Rightarrow y' = 5(e^x) + 0 = 5e^x$$

$$9. G(x) = \sqrt{x} - 2e^x = x^{1/2} - 2e^x \Rightarrow G'(x) = \frac{1}{2}x^{-1/2} - 2e^x = \frac{1}{2\sqrt{x}} - 2e^x$$

$$10. R(t) = 5t^{-3/5} \Rightarrow R'(t) = 5\left[-\frac{3}{5}t^{(-3/5)-1}\right] = -3t^{-8/5}$$