Lab worksheet for Tuesday, 2 Feb 2021

Practice: Chain Rule, Derivatives of Exponentials

Find the derivatives of the following fuctions:

1. $f(x) = \cos(x^3)$.

2. $f(x) = \sin(3x^2 + 2x + 10)$.

3. $f(x) = \sin(x)^6$.

4. $f(x) = (\cos(x) - \sin(x))^5$.

5. $f(x) = 3e^{4x+5}$.

6. $f(x) = \cos(e^x)$.

7. $f(x) = e^{\sin(x)+\cos(x)}$.

8. $f(x) = 3^{5x}$.

9. $h(x) = -\sin(x^2 + 3x + 1)^2$.

10. $g(x) = 3\cos(3x)^3$.

11. $f(t) = 10\sin(2t^4 + 3t^2 - 1)^3$.

12. f(x) = $e^{x^3+3x^2+sin(x)}$.

13. f(x) = $\sin(e^x + 3x)$.

14. g(x) = $\cos(3x^2 + 2x + e^x)$.

15. f(x) = $6^{x^2+2x+cos(x)}$.

16. f(x) = $\sin((x^7 - 5x^2)^3)$.

17. f(x) = sin(cos(e^x)).

18. f(x) = $e^{\sqrt{x}}$.

19. f(x) = sin(sin(sin(x)).

20. f(t) = $sin^2(e^{sin^2(t)})$.