Final Project – Chapter 14

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July 4, 2020

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19. #8
    (a) The linearization of f is a function which results in a plane tangent to the surface of $f(x, y)$ at the given point.
    (b) The formula for the approximation may be expressed as:
    $$f(x, y) \approx f(a, b) + \frac{\partial f}{\partial x}(x - a) + \frac{\partial f}{\partial y}(y - b)$$
    (c) In geometric terms, the linear approximation may be used to approximate values near (a, b)
20. #13
    (a)
    (b)

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21. #9
    (a)
22. #13
    (a)
23. #17
    (a)
24. #25

(a)

(b)

(c)

(d)

25. #31

    (a)

26. #32

    (a)

27. #35

28. #39