1. Make a picture/graph of this situation, using your favorite technological 3D visualizer.
2. What's your elevation?
3. From your perspective, what does your hike look like? Meaning: your hike is some sort of one-dimensional path—what's the equation for it, and what does it look like (i.e., draw/make a picture)?
4. What's the function for the slope along your hike? (Draw a picture, too.)
5. How steep is the sand dune at the point you're standing (in the direction you're hiking)? Give the answer both in slope units, and as an angle up from the horizontal.

1 | Taylor Series in e^x

Calculate, from the big scary formula, the Taylor series for e^x, centered around $x = 2$.

$$f(x) = e^x = e^2 + e^2(x-2) + \frac{e^2(x-2)^2}{2} + \frac{e^2(x-2)^3}{3} \cdots + \frac{e^2(x-2)^n}{n} \tag{1}$$

2 | Diff. in Higher Dimensions

2.1 | Derivative Matrix 14

Find the derivative matrix of

$$f : \mathbb{R}^4 \to \mathbb{R}^5; f(x_1, x_2, x_3, x_4) = \begin{bmatrix} x_1 x_3 \\ \tan(x_4) \\ -\ln(x_2) \\ (3x_1 - 2)^4 \\ 1729 \end{bmatrix} \tag{2}$$