How far is the horizon?

The point is to explain the math that you figured out this week to someone who generally knows as much math as you do, but hasn't thought about this particular question before. So you could imagine that the reader is a colleague from a math class you took last quarter, or a friend back home, or even yourself from a week ago.

You don't need to follow the questions on the worksheet closely, nor give a blow-by-blow of your group discussion; present the material in the order that you think will be clearest to the reader.

Here's an inline equation: $\sqrt{(r+h)^2 - r^2} = \sqrt{2rh + h^2}$. You can have one of those in the middle of a sentence. If your formula is too big and clunky to fit inline, you can display it like this:

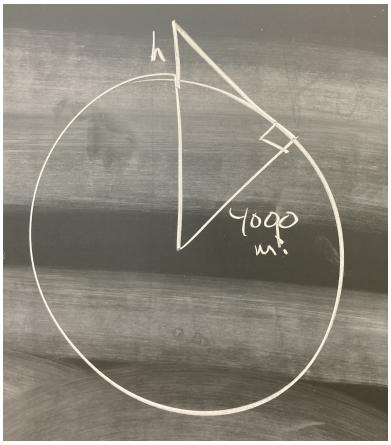
$$\arccos\left(\frac{4000 \text{ mi}}{h + 4000 \text{ mi}}\right).$$

If you can't figure out how to type some formula that you want, ask Google, or ChatGPT, or email me (adding@uoregon.edu). But you should write in sentences and paragraphs with bits of math in them, not just give a list of formulas. The test is whether you can read what you wrote aloud and have it sound natural.

You'll want to include some diagrams. One option is to leave a blank space like this

and then draw the picture later on a tablet, or print out the pdf, draw by hand, and scan it back in to upload to Canvas.

Another option is to draw a picture on paper and take a photo, or draw a picture on a tablet, and then include it in your TeX file like this:



If you're using Overleaf, it will want to put your pictures in a "figure" environment, but those are a pain to use – I recommend just using a "center" environment as I've done here.

Or if you want to learn how to make really slick diagrams with TikZ, that's great, although I'm not sure it's the best use of your time.

If you want to adjust the spacing between paragraphs, you could start by including `\addtolength \parskip \medskipamount` in the preamble, that is, before `\begin{document}`.

Upload the pdf to Canvas, not the tex file.