

**MATH 202: VECTOR CALCULUS**  
**READING QUESTIONS FOR FRIDAY WEEK 3**

**Reading assignment.** CAES §4.4.

*Problem 1.* CAES 4.4.2.

*Problem 2.* The crucial line in the proof of the chain rule is

$$\mathcal{O}(o(h)) + o(\mathcal{O}(h) + o(h)) = \mathcal{O}(o(h)) + o(\mathcal{O}(h)) = o(h) + o(h) = o(h).$$

Explain each of the above equalities in your own words.