## Fall 2021, Math 620: Preliminary Problem Set 15 Due: Thursday, December 2nd, 2021 Categories and Universal Properties

**Preliminary problems.** These problems should be completed before discussion on Thursday.

(P1) Write the definition of the product  $A \times B \times C$  of 3 objects in a category  $\mathcal{C}$ . Draw a associated diagram (be sure to use "dashed" arrows for morphisms that are claimed and "solid" arrows those fixed as input).