

# Chapter 2

## Starting with a question

In my view asking good questions is of the utmost importance in learning. The same can be said of doing mathematical research, and in a certain sense the “best” (and maybe only possible) learning of mathematics is undertaken in the same manner in which research is undertaken. That is, one approaches the material or subject matter under the assumption that the answers to certain questions are unknown.<sup>1</sup>

As a very practical application, let me suggest that you start each class meeting with a question of your own composition. Likewise, you can start each day with a question. Giving a little attention to these tasks, you should pretty quickly figure out which kinds of questions are the ones you like to ask. The following are some questions I have asked.

---

<sup>1</sup>It may be suggested that a technical difference lies in the fact that material which is “learned” is already “known” by some other human, while that which is the subject of research is “unknown” to anyone. In practice, the practice of learning, if I want to learn something then until I learn it I might as well assume it is unknown.