

There are two philosophically different approaches to solving engineering questions.

I) The “equation focused” method (often applied successfully with homework):

- 1) I understand the problem well enough to find an equation for it
- 2) I can find in the book or my notes an equation that seems to apply
- 3) My job is to make the equation fit the problem

II) The “first principle” method:

- 1) I understand the problem well enough to understand the physics – the *first principles*
- 2) There may some equations or testing or computer analyses or some other tool that will help me quantify the problem.
- 3) My job is to understand the problem well enough to make important design decisions.