

# Hints for Doing Homework

Many of the tasks assigned in homework are expressed using idioms specific to this class. A few of these words are mentioned below, along with the specific requirements they indicate.

**solve** Also **give a solution** or **derive**. You *must* show your work.

Obvious calculations of common operations, such as the  $6 \times 5 \times 4 \times 3 \times 2 \times 1$  in  $6! = 6 \times 5 \times 4 \times 3 \times 2 \times 1 = 720$  may be omitted, but even slightly more complex operations such as  ${}_6C_3 = \frac{6!}{3!3!} = 20$  should be written out.

Fractions should be in lowest terms, but do not need to be reduced to decimals. Square roots of perfect squares should be reduced if you recognize them, but all roots *may* be left in the standard notations  $\sqrt{x}$  or  $x^{\frac{1}{2}}$  or similar as seems most appropriate.

**discuss** Most important, relate the computation to the real problem in economics (or physics or biology for some of the “toy” examples).

Especially mention anything paradoxical, surprising, or extreme about the interpretation of the result in context of the real problem.

*November 15, 2018*

0-1

**compare** Like **discuss**, but more specific: you should use statements of the form “*this* is the same as *that*,” “*this* is different from *that*,” and (best) “*this* is similar to *that*, except ...”

When appropriate use quantitative or ordering comparisons: more/yes, sooner/later, *etc.*

**show *expr* is *expr*** Often you need to transform one of the expressions to the other. You must show your work, not just “ $\text{expr } a = \text{expr } b$  (same!)”

**notation** You may define your own notation. For example, in Q#2 you may be asked to compare  $\delta$  in Q#1 to  $\delta$  in Q#2. This gets confusing and long winded (*i.e.*, because you write “ $\delta$  of Problem 1” over and over again). It may be useful to rewrite one of the results by substituting  $\gamma$  for  $\delta$  everywhere.