Problem 1. All homework must be written in complete English sentences.

A) Yes, no exceptions

B) Yes, unless otherwise specified

C) No, this is a math class not a writing class

Solution. B) □

Problem 2. If you can do all of the problems on the homework, you will do well on the exams.
A) True B) Not necessarily

Solution. B) □

Problem 3. I worked hard on my problem set but got stuck on one problem, so I asked my tutor for help. My tutor showed me how to do the problem and I wrote up the solution myself while we were talking. Is it permissible for me to submit this solution with my homework?
A) Yes B) Yes, but only if I cite my tutor's assistance C) No

Solution. C) □

Problem 4. If you can't make it to class you can e-mail your homework to me.

A) True

B) False

Solution. A) You may e-mail your homework to me if you follow the rules outlined in the syllabus. □

Problem 5. Absence from an exam will be excused with a note from a doctor or the Office of the Dean of Students.
A) Yes B) No C) Depends on the note

Solution. C) □

Definition 1. We say that an integer n *divides* another integer m if there is a third integer c such that $m = cn$. We also say that m is *divisible* by n in this situation.

Definition 2. We say that an integer n is *even* if it is divisible by 2.

Definition 3. We call an integer n prime if $n > 1$ and it has no positive divisors other than itself and 1.

Theorem 4. The only integer that is even and prime is 2.

Proof. First we prove that 2 is both even and prime. Since $2 = 1 \times 2$, we know that 2 is divisible by 2, so 2 is even. To see that it is prime we check that there are no integers m with $1 < m < 2$ that divide 2. But there are no integers at all between 1 and 2, so 2 is prime.

Now let us suppose that n is an integer that is both even and prime. Since n is even, n is divisible by 2. Since n is prime, the only positive integers that divide n are 1 and n. Since 2 is a positive integer dividing n and $2 \neq 1$, we must therefore have $2 = n$. This shows that whenever n is both even and prime, $n = 2$, which is exactly what we wanted. □