

Homework II

Honors I101 Fall 2008

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Problems (Due Tuesday at beginning of Class)

1. Change 101_3 to base 10

2. Convert

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to base 16

3. A *problem* is defined as the intent to change from the current state of affairs to a new state of affairs. What is a *solution*?

4. The most *important* element of problem solving is what?

5. Consider the following statement:

I don't like being wait-listed—I don't know if I should go to the class, purchase the books—and what if I need the class to graduate? Isn't there a better way to match need with what's being offered?

(a) Write a problem statement \mathcal{S} that you believe captures the issue here.

(b) Using the methods of (1) paraphrase (2) negation (3) broaden (4) narrow (5) change focus (6) causation (why?) rewrite \mathcal{S} .

(c) What is the current state of affairs? What is the new state of affairs?

6. Many people often confuse “happiness” with a tangible state of affairs that can be *directly* obtained. Happiness, to the contrary, is a by-product of a state. How would you imagine this affects problem solving (positively and negatively)? A reasonably decent paragraph will do.

7. An alien lands next to your dorm in an invisible spaceship. It comes to your room and wishes to engage in conversation. You remember H101 and take out 11 plastic cups and place one jelly bean in the second cup, two jelly beans in the third cup, . . . and ten jelly beans in the eleventh cup. Then you write 0 beneath the first cup, 1 beneath the second, and so on. The alien smiles. It takes your pen and writes next to your numbers (in ascending order) $\perp, \neg, \vdash, \perp\neg, \neg\neg, \vdash\neg, \dots, \neg\perp\vdash$. What base does the alien use? What else is different about its number system?