tcore 112: Quiz 5

Key

1. [2] Spherical geometry challenged the axioms that Euclid set out in 300B.D. Kurt Gödel was a mathematician who challenged another set of axioms. What axioms did Gödel upset in the 1930's?

Aristotle's system of logic.
There were 3 axs. identity, non-contradiction and the principle of the excluded middle.
Gödel showed the last of these axs may not be true. That is, there exist statements whose truth can't be determined (within confined to the system in which the statements were made).

shtd (5)
stre (5)
logic (1)
(10)

2. [3] Recall that the haiku is a form of Japanese poetry consisting of 17 syllables in three phrases of 5, 7, and 5 syllabus respectively. Find at least three reasons that the haiku is still used today despite its strict rules.

Some that we came up with in class:

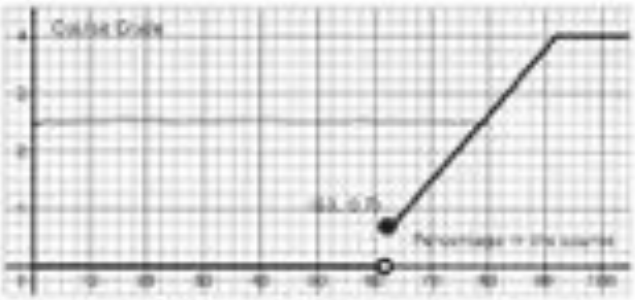
1) historically interesting
2) tradition
3) fun
4) the restrictions provide a challenge - like a game
5) the restrictions urge/require creativity to overcome
6) can be used as a teaching tool (what a syllable is)

reason (1)
reason (1)
reason (1)

3. Lois Lane was given the following information on the first day of her core class:

Grades: The following weights will be used to calculate your grade.

Journals	15%
Homework	15%
Quizzes	15%
Origami Project	10%
Papers	10%
Midterm	15%
Final	20%



The above grade assignment is based off the University of Washington, Tacoma's grading scale posted at http://www.tacoma.washington.edu/enrollmentservices/grading.cfm

(a) [3] At the start of week seven Lois Lane looked up her journal marks on Catalyst and found the following information:

Journal Date:	1/3	1/5	1/10	1/12	1/19	1/24	1/26	1/31	2/2	2/7	2/9
Score:	7	10	7	10	10	8	10	10	10	10	10

Each entry is worth 10 points. Compute Lois Lane's journal average.

stated (+.5)
sum (+1)
÷ (+1)
get ≈ (+.5)

$$\frac{70+100+70+100+100+80+100+100+100+100+100}{11} = 92.7 \approx 93\%$$

(b) [2] Use the information Lois Lane was given on the first day of class to estimate the percentage she needs to get in the course to earn a 2.5 in the course.

stated (+.5)
reading graph (+.5)
get ≈ (+1)

80% (I'll accept ± 5%)

(c) [5] In week eight Lois Lane computed her average in all the categories and made the following table.

category	Lois' ave	category	Lois' ave
Journals	93%	Project	100%
Homework	65%	Papers	74%
Quizzes	77%	Midterm	73%

Assuming her averages do not change much in the remaining works, what score could Lois Lane get on her final exam to make sure she gets a 2.5 in the class?

find (b) (+1)

$$80 = \underbrace{.93\cdot.15}_{\text{journal points}} + \underbrace{.65\cdot.15}_{\text{points from HW}} + \underbrace{.77\cdot.15}_{\text{points from Quiz}} + \underbrace{1.00\cdot.10}_{\text{points from Project}} + \underbrace{.74\cdot.10}_{\text{points from Papers}} + \underbrace{.73\cdot.15}_{\text{points from Midterm}} + \underbrace{x\cdot.20}_{\text{points from final}}$$

% in each in the class

products (+1)
sum (+1)
variable introduced (+1)
alg (+1)

$$80 = 63.6 + x\cdot.20$$
$$-63.6 \quad -63.6$$

$$\frac{16.4}{.20} = \frac{x\cdot.20}{.20} \Rightarrow x = 82\%$$