MTHT 400
Writing Exam Questions
Nov. 17, 2005

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The following problems are taken from high school algebra tests. In each case, if possible, indicate which answer is correct. Then evaluate the question according to the following criteria.

a. Is the queston well-posed?

b. What concept or skill is being tested? Is it appropriate for the final exam in Algebra I?

c. Is the multiple choice format an important way to formulate the question or just a convenience in grading?

Choose one question and rewrite it to address some of the concerns you have about the original formulation.

1. A student tries to solve the problem: How long does it take a car to travel 240 miles if the car's rate is 60 mi/h? The student uses unit analysis to check the problem. Which set of units is correct.

(A) $\frac{mi/h}{h}$

(B) $\frac{h}{mi/h}$

(C) $\frac{mi/h}{m}$

(D) $\frac{mi}{mi/h}$

2. -(3-x) + 8 = 2x

(A) 11

(B) 5

(C) $\frac{5}{3}$

(D) none of the above

3. If $0 < x < 1$, which expression has the greatest value?

(A) $x - 2$

(B) $2x$

(C) $2/x$

(D) x^2

4. In 1981 the pollution in a local lake was rated at 1.4 parts per million. In 1985 the pollution was rated at 3.0 points per million. Which of the following expresses the rate of change in parts per million from 1981 to 1985?

(A) $\frac{2}{5}$

(B) $\frac{8}{5}$

(C) $\frac{5}{8}$

(D) $\frac{1}{4}$

5. In the number 92543.24234, what is the sum of the thousands place and the ten-thousandths place

(A) 11

(B) 8

(C) 6

(D) 7