

Try These!

1. How is “one-fourth of one percent” written as a decimal?
(A) $.0\frac{1}{4}$ (B) .025 (C) .0025 (D) .25
(Only 27% of 377 first year college students in New York answered this correctly in 1950).

2. Estimate the answer to 3.04×5.3 .
(A) 1.6 (B) 16 (C) 160 (D) 1600
(Only 37.6% of American 17-year olds could solve this in the 1983 National Commission on Excellence test)

3. Using the letter S to represent the number of students (at this university) and the letter P to represent the number of professors, write an equation that summarizes the following sentence: “There are six times as many students as professors at this university.”
(37% of 1st year engineering students at the University of Massachusetts got this wrong in 1985)

4. Among the assertions made in this problem, there are 3 errors. What are they?

a. $2 + 2 = 4$	b. $4 \div \frac{1}{2} = 2$	c. $3\frac{1}{5} \times 3\frac{1}{8} = 10$
d. $7 - (-4) = 11$	e. $-10(6 - 6) = -10$	

5. A secretary types four letters to four people and addresses the four envelopes. If she inserts the letters at random, each in a different envelope, what is the probability that exactly three letters will go into the right envelopes?

6. If you took three apples from a basket that held 13 apples, how many apples would you have?

7. If nine thousand nine hundred and nine dollars is properly written \$9909, how should twelve thousand twelve hundred and twelve dollars be written?

8. A chemist discovered that a certain reaction took 80 minutes when he wore a jacket. When he was not wearing a jacket, the same reaction always took an hour and 20 minutes. Can you explain?

9. "I guarantee," said the pet-shop salesperson, "that this parrot will repeat every word it hears." A customer bought the parrot but found it would not speak a single word. Nevertheless, the salesperson told the truth. Explain.

References

Gardner, M. (1978). *Mathematical Magic Show: More Puzzles, Games, Diversions, Illusions and Other Mathematical Sleight-Of-Mind from Scientific American*. Random House Inc.

Stueben, M., & Sandford, D. (1998). *Twenty years before the blackboard: The lessons and humor of a mathematics teacher*. Washington, DC: Mathematics Association of America.