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1.  $.4 + .02 + .006 =$

- A) .012    B) .066    C) .12    D) .24    E) .426

1987 Q1

1. E The sum is .426.

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2000 Q2

2. Which of these numbers is less than its reciprocal?

- (A) -2    (B) -1    (C) 0    (D) 1    (E) 2

2. **Answer (A):** The number 0 has no reciprocal, and 1 and -1 are their own reciprocals. This leaves only 2 and -2. The reciprocal of 2 is  $\frac{1}{2}$ , but 2 is not less than  $\frac{1}{2}$ . The reciprocal of -2 is  $-\frac{1}{2}$ , and -2 is less than  $-\frac{1}{2}$ .

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3. Which of the following numbers is the largest?

- A) .99      B) .9099      C) .9      D) .909      E) .9009

1989 Q3

3. A We can compare the five numbers in the set by annexing zeroes so each one has four decimal places. The numbers, then, are .9900, .9099, .9000, .9090, .9009 so that .99 = .9900 is the largest.

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1997 Q3

3. Which of the following numbers is the largest?

- (A) 0.97    (B) 0.979    (C) 0.9709    (D) 0.907    (E) 0.9089

3. (B) Write each decimal to four places:  
and 0.9790 is seen to be the largest.
- |        |
|--------|
| 0.9700 |
| 0.9790 |
| 0.9709 |
| 0.9070 |
| 0.9089 |

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**1999 Q3**

3. Which triplet of numbers has a sum NOT equal to 1?

(A)  $(\frac{1}{2}, \frac{1}{3}, \frac{1}{6})$       (B)  $(2, -2, 1)$       (C)  $(0.1, 0.3, 0.6)$

(D)  $(1.1, -2.1, 1.0)$       (E)  $(-\frac{3}{2}, -\frac{5}{2}, 5)$

3. **Answer (D):**  $1.1 + (-2.1) + 1.0 = 0$ . The other triplets add to 1.

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4. The product  $(1.8)(40.3 + .07)$  is closest to

A) 7      B) 42      C) 74      D) 84      E) 737

1986 Q4

4. (C) The desired product is about  $2(40) - .2(40) = 80 - 8 = 72$ , so (C) is correct.

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**1990 Q5**

5. Which of the following is closest to the product  $(.48017)(.48017)(.48017)$ ?

A) 0.011      B) 0.110      C) 1.10      D) 11.0      E) 110

5. B The desired product is about  $\frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} = \frac{1}{8} = 0.125$ .

OR

The desired product is about  $(.5)(.5)(.5) = 0.125$ .