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## 1987 Q21

21. Suppose  $n^*$  means  $\frac{1}{n}$ , the reciprocal of  $n$ . For example,  $5^* = \frac{1}{5}$ .

How many of the following statements are true?

i)  $3^* + 6^* = 9^*$

iii)  $2^* \cdot 6^* = 12^*$

ii)  $6^* - 4^* = 2^*$

iv)  $10^* \div 2^* = 5^*$

A) 0    B) 1    C) 2    D) 3    E) 4

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## 1991 Q21

21. For every  $3^\circ$  rise in temperature, the volume of a certain gas expands by 4 cubic centimeters. If the volume of the gas is 24 cubic centimeters when the temperature is  $32^\circ$ , what was the volume of the gas in cubic centimeters when the temperature was  $20^\circ$ ?

(A) 8    (B) 12    (C) 15    (D) 16    (E) 40

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## 1999 Q22

22. In a far-off land three fish can be traded for two loaves of bread and a loaf of bread can be traded for four bags of rice. How many bags of rice is one fish worth?

(A)  $\frac{3}{8}$     (B)  $\frac{1}{2}$     (C)  $\frac{3}{4}$     (D)  $2\frac{2}{3}$     (E)  $3\frac{1}{3}$

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2009 Q23

23. On the last day of school, Mrs. Wonderful gave jelly beans to her class. She gave each boy as many jelly beans as there were boys in the class. She gave each girl as many jelly beans as there were girls in the class. She brought 400 jelly beans, and when she finished, she had six jelly beans left. There were two more boys than girls in her class. How many students were in her class?

- (A) 26    (B) 28    (C) 30    (D) 32    (E) 34

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1990 Q24

24. Three  $\Delta$ 's and a  $\diamond$  will balance nine  $\bullet$ 's. One  $\Delta$  will balance a  $\diamond$  and a  $\bullet$ .



How many  $\bullet$ 's will balance the two  $\diamond$ 's in this balance?

- A) 1    B) 2    C) 3    D) 4    E) 5



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25. Barry wrote 6 different numbers, one on each side of 3 cards, and laid the cards on a table, as shown. The sums of the two numbers on each of the three cards are equal. The three numbers on the hidden sides are prime numbers. What is the average of the hidden prime numbers?



(A) 13

(B) 14

(C) 15

(D) 16

(E) 17