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2017 Q21

21. Suppose a, b, and c are nonzero real numbers, and $a+b+c=0$. What are the possible value(s) for $\frac{a}{|a|}+\frac{b}{|b|}+\frac{c}{|c|}+\frac{abc}{|abc|}$?

(A) 0 **(B)** 1 and -1 **(C)** 2 and -2 **(D)** 0, 2, and -2

(E) 0, 1, and -1

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1995 Q22

22. The number 6545 can be written as a product of a pair of positive two-digit numbers. What is the sum of this pair of numbers?

(A) 162 **(B)** 172 **(C)** 173 **(D)** 174 **(E)** 222

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2008 Q22

22. For how many positive integer values of n are both $\frac{n}{3}$ and $3n$ three-digit whole numbers?

(A) 12 **(B)** 21 **(C)** 27 **(D)** 33 **(E)** 34

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1990 Q22

22. Several students are seated at a large circular table. They pass around a bag containing 100 pieces of candy. Each person receives the bag, takes one piece of candy and then passes the bag to the next person. If Chris takes the first and the last piece of candy, then the number of students at the table could be

A) 10 B) 11 C) 19 D) 20 E) 25

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2001 Q22

22. On a twenty-question test, each correct answer is worth 5 points, each unanswered question is worth 1 point and each incorrect answer is worth 0 points. Which of the following scores is **NOT** possible?

(A) 90 (B) 91 (C) 92 (D) 95 (E) 97

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2010 Q22

22. The hundreds digit of a three-digit number is 2 more than the units digit. The digits of the three-digit number are reversed, and the result is subtracted from the original three-digit number. What is the units digit of the result?

(A) 0 **(B)** 2 **(C)** 4 **(D)** 6 **(E)** 8

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2011 Q22

22. What is the **tens** digit of 7^{2011} ?

(A) 0 **(B)** 1 **(C)** 3 **(D)** 4 **(E)** 7

2014 Q22

22. A 2-digit number is such that the product of the digits plus the sum of the digits is equal to the number. What is the units digit of the number?

(A) 1 **(B)** 3 **(C)** 5 **(D)** 7 **(E)** 9

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2015 Q22

22. On June 1, a group of students is standing in rows, with 15 students in each row. On June 2, the same group is standing with all of the students in one long row. On June 3, the same group is standing with just one student in each row. On June 4, the same group is standing with 6 students in each row. This process continues through June 12 with a different number of students per row each day. However, on June 13, they cannot find a new way of organizing the students. What is the smallest possible number of students in the group?

(A) 21 **(B)** 30 **(C)** 60 **(D)** 90 **(E)** 1080