Problem 4. When the positive integer s is divided 12, the remainder is 6. When the positive integer t is divided by 12, the remainder is 9. What is the remainder when the product st is divided by 9?

(A) 1 (B) 3 (C) 5 (D) 7 (E) 0

Problem 7. If a, b, c and d are different positive integers such that a is divisible by b, b is divisible by c, and c is divisible by d, which of the following statements must be true?
I. a is divisible by cd. II. a has at least 4 positive factors. III. $a = bcd$

(A) I only (B) II only (C) I and II (D) I and III only (E) I, II, and III

Problem 11. When Rachel divides her favorite number by 7, she gets a remainder of 5. What will the remainder be if she multiplies her favorite number by 5 and then divides by 7?
(A) 4 (B) 3 (C) 2 (D) 1 (E) 0

Problem 14. How many 2-digit numbers are not divisible by 13?
(A) 90 (B) 83 (C) 13 (D) 7 (E) 84

Problem 16. There are 24 four-digit numbers which use each of the digits 1, 2, 3, 4. How many of these are divisible by 11?
(A) 10 (B) 6 (C) 5 (D) 4 (E) 8

Problem 21. What digit can replace K in the number $\underline{9K73K0}$ so that $\underline{9K73K0}$ will be divisible by 60?
(A) 4 (B) 3 (C) 2 (D) 1 (E) 0