

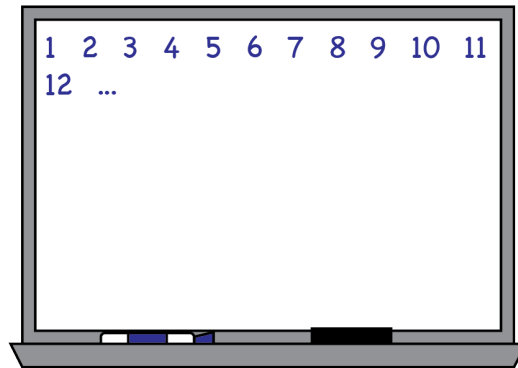


## Problem of the Week

### Problem D

### Wipe Away 2

Ajay writes the positive integers from 1 to 1000 on a whiteboard. Jamilah then erases all the numbers that are multiples of 9. Magdalena then erases all the remaining numbers that contain the digit 9. How many numbers are left on the whiteboard?



NOTE: In solving this problem, it may be helpful to use the fact that a number is divisible by 9 exactly when the sum of its digits is divisible by 9. For example, the number 214578 is divisible by 9 since  $2 + 1 + 4 + 5 + 7 + 8 = 27$ , which is divisible by 9. In fact,  $214578 = 9 \times 23842$ .