



## Problem of the Week

### Problem A

### Adding and Subtracting

Follow the steps below.

**Step 1:** Pick two different three-digit numbers. Label the larger number  $A$  and the smaller number  $B$ .

**Step 2:** Subtract  $B$  from 999 and label the difference  $C$ .

**Step 3:** Add  $A$  and  $C$  and label the sum  $D$ .

**Step 4:** Subtract 1000 from  $D$  and label the difference  $E$ .

**Step 5:** Add 1 to  $E$  and label the sum  $F$ .

- (a) What is the connection between the number  $F$  and the numbers  $A$  and  $B$ ?
- (b) Try the same steps with different numbers. Do you think you will always get the same result? Why or why not?

