

Homework 21, due October 23

- (1) Test 118901521 for primality using the Fermat test for several values of  $a$ . Is 118901521 prime?
- (2) Test 104173 for primality using the Solovay-Strassen test. Use enough values of  $a$  to be 99 percent sure that it is prime. (Recall from class that if a number is composite, the test will tell you so for at least half of the possible  $a$ .)
- (3) (Page 200, problem 13) Test 38200901201 for primality using the Miller-Rabin test with  $a = 2$ . Then test using  $a = 3$ . Explain your results.