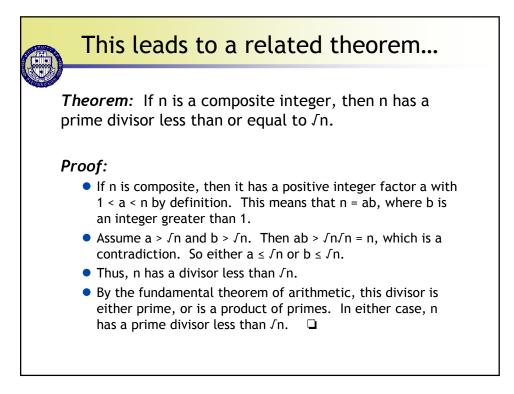


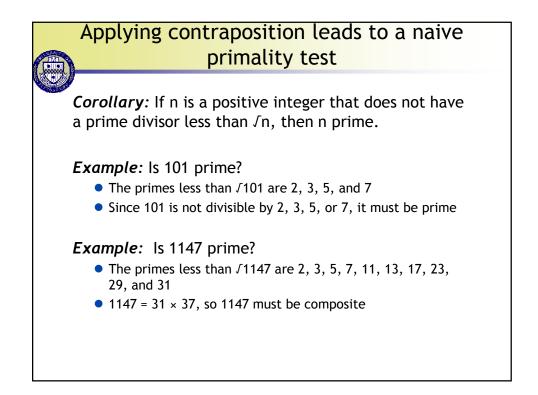
Theorem (The Fundamental Theorem of Arithmetic): Every positive integer greater than 1 can be written uniquely as a prime or the product of two or more primes where the prime factors are written in order of nondecreasing size.

Examples:

- $100 = 2 \times 2 \times 5 \times 5 = 2^2 \times 5^2$
- 641 = 641
- 999 = $3 \times 3 \times 3 \times 37 = 3^3 \times 37$

Note: Proving the fundamental theorem of arithmetic requires some mathematical tools that we have not yet learned.





The Si prime							rce a	lgorit	hm fo	or findi	ng all
Step 1	: List	t the r	numb	ers le	ss tha	ın <i>n</i>					
	2	3	*	5		7	*			11	
		13	*	*	×	17	*	19	*	*	
		23		\bigotimes	*	*	*	29	*	31	
	*	*	*	\approx	*	37	*	*		41	
	*	43	*	*		47		\Rightarrow		*	
		53		\approx				59		61	
						67				71	
•	?: If t multip		xt ava	ailable	e num	nber is	s less	than	/n, cr	ross ou	t all

