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► Introduction

▼ Week 1

**Introduction to Prime Numbers**

Week 1 Problems due  
Jan 27, 2016 at 23:30  
UTC

**Homework 1**

Homework 1 due Jan  
27, 2016 at 23:30 UTC

**Completion Checklist 1**

Completion Checklist 1  
due Jan 27, 2016 at  
23:30 UTC

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Global  
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Week 1 &gt; Introduction to Prime Numbers &gt; Problem (4-6)

**PROBLEM 4** (1/1 point)

What can we do efficiently using the Sieve of Eratosthenes? Choose the correct sentence.

- ☐ We can efficiently check whether a given large integer is a prime number or not.
- ☐ We can efficiently calculate the product of two large prime numbers.
- ☐ We can efficiently count the number of primer numbers between 10,000 and 10,100.
- ☒ We can efficiently make a list of all prime numbers less than 100.



*You have used 1 of 2 submissions*

**PROBLEM 5** (2/2 points)

Perform by yourself the Sieve of Eratosthenes for integers less than 50 using a pencil and paper. Under the process of the Sieve of Eratosthenes, all integers which are not prime numbers are removed from the list.

What is the last integer removed from the list?



**Answer: 49**

*You have used 1 of 2 submissions*

**PROBLEM 6** (1/1 point)

Choose all of Mersenne primes.

<input checked="" type="checkbox"/>	3	✓
<input type="checkbox"/>	5	
<input checked="" type="checkbox"/>	7	✓
<input type="checkbox"/>	11	
<input type="checkbox"/>	29	
<input checked="" type="checkbox"/>	31	✓
<input type="checkbox"/>	37	
<input type="checkbox"/>	1,023	
✓		
You have used 1 of 2 submissions		

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