

The Sieve of Eratosthenes

name _____

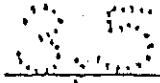
Around 200 B.C., a Greek named Eratosthenes invented a method of finding prime numbers. It is called the Sieve of Eratosthenes because all numbers that are not prime are sifted out.

Use the table and these steps to make a Sieve.

1. Cross out 1 because it is not prime.
2. 2 is prime. Cross out all other multiples of 2 because they are not prime.
3. 3 is prime. Cross out all other multiples of 3 that have not been crossed out.
4. Continue the process by using the next prime numbers: 5, 7, 11, and 13. The numbers that are not crossed out are the prime numbers less than 200.

Twin primes are pairs of primes, such as 3 and 5, whose difference is two.

5. List the twin primes that are less than 200.

	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200