

The Sieve of Eratosthenes

I can find all of the prime numbers up to 100.



On this hundred square, we are going to 'sieve' out all of the numbers that are composite so that we are left with just the prime numbers.

- 1) Start by highlighting or circling 2 and 3 because they are the first prime numbers.
- 2) Cross out all of the multiples of 2 in pencil like this:
- 3) Next, cross out all of the multiples of 3. Are any multiples of 3 already crossed out? If so, do this:
- 4) Now, cross out the multiples of 5.
- 5) Now, cross out the multiples of 10.
- 6) Now, cross out the multiples of 4.
- 7) Now, cross out the multiples of 6.
- 8) Now, cross out the multiples of 7.
- 9) Now, cross out the multiples of 8.
- 10) Now, cross out the multiples of 9.
- 11) Finally, now that you have 'sieved' out all of the composite numbers, you should be left only with the prime numbers. Circle or highlight them and write them out below:

	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







The Sieve of Eratosthenes **Answers**

Question	Answer
1.	On this hundred square, we are going to 'sieve' out all of the numbers that are composite so that we are left with just the prime numbers.
	2 3 4 5 7 8 7 16 11
11.	Finally, now that you have 'sieved' out all of the composite numbers you should be left only with the prime numbers. Circle or highlight them and write them out below:
	2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97



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On this hundred square, we are going to 'sieve' out all of the numbers that are composite so that we are left with just the prime numbers.

- 1) Start by highlighting or circling 2 and 3 because they are the first prime numbers.
- 2) Cross out all of the multiples of 2 in pencil like this:

3) Next, cross out all of the multiples of 3. Are any multiples of 3 already crossed out? If so, do this:

- 4) Now, go through all of your multiplication tables one by one and cross off any composite numbers.
- 5) Once you have 'sieved' out all of the composite numbers, you should be left only with the prime numbers. Circle or highlight them and write them out below.

them out	below.

6) What would the next 5 prime numbers be after 100?

	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







The Sieve of Eratosthenes **Answers**

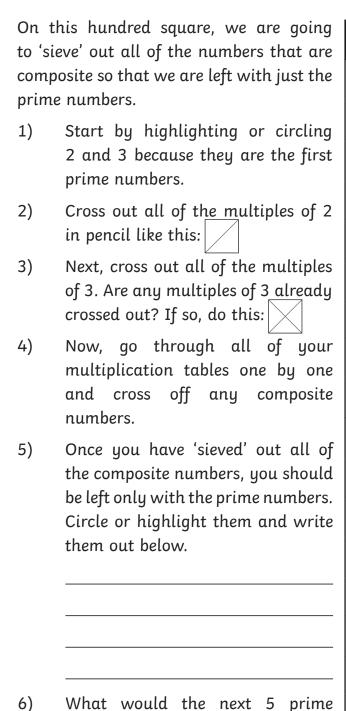
Question	Answer
1.	On this hundred square, we are going to 'sieve' out all of the numbers that are composite so that we are left with just the prime numbers.
	2 3
	81 82 83 84 85 86 81 88 89 90 91 92 93 94 95 90 97 98 99 100
5.	Finally, now that you have 'sieved' out all of the composite numbers you should be left only with the prime numbers. Circle or highlight them and write them out below:
	2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97
6.	What would the next 5 prime numbers be after 100?
	101, 103, 107, 109, 113





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numbers be after 200?

	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





The Sieve of Eratosthenes **Answers**

Question						Ans	wer					
1.	On this hundred square, we are going to 'sieve' out all of the numbers that are composite so that we are with just the prime numbers.											
			2	3	A	(5)	X	7	8	X	10	
		11)	X	(13)	14	15	16	17)	X	19	20	
		21	22	23)	X	25	26	21	28	29	\nearrow	
		(31)	32	33	34	35	36	37)	38	39	40	
		41)	×	43)	44	45	46	47	×	49	50	
		51	52	53	X	5/5	56	51	58	59	×	
		61)	62	63	64	65	×	67	68	69	76	
		71	X	73	74	75	76	71	×	79	80	
		81	82	83)	*	8/5	<u></u>	81	8/8	89	×	
		91	92	93	94	95	X	97)	98	99	106	
		(0)	1002	(03)	10/4	10/5	10/6	(0)	1868	(0)	1110	
		111	11/2	(113)) *	11/5	11/6	117	11/8	1119	130	
		121	122	123	124	125	136	(27)	128	120	130	
		(131)	1322	12/3	13/4	13/5	126	(137)	1388	(39)	140	
		141	142	143	134	145	146	147	148	(49)	130	
		(151)	152	153	154	185	186	(57)	158	159	160	
		171	170	(63)	164	165 175	166 176	177	178	170	186	
		181	172 182	(173) 183	184	185	186	187	188	(179) 189	190	
		(191)	190	(193)	194	195	196	(197)	198	(99)	200	
5.	Finally, now that you have	'sieve		t all	of the		posite	e num	bers		hould	be left only with the pri
	numbers. Circle or highlight 2, 3, 5, 7, 11, 13, 17, 19, 23, 2 131, 137, 139, 149, 151, 157, 16	9, 31,	37, 4	1, 43,	47, 5.	3, 59,	61, 6	7, 71,	73, 7	9, 83,	89, 9	7, 101, 103, 107, 109, 113, 12
6.	What would the next 5 pri	ne nu	ımber	s be	after	200?						
	211, 223, 227, 229, 233											

