



Name _____ Date _____

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Enrichment

The Sieve of Erathosthenes

Erathosthenes was a Greek mathematician who lived from about 276 B.C. to 194 B.C. He devised the **Sieve of Erathosthenes** as a method of identifying all the prime numbers up to a certain number. Using the chart below, you can use his method to find all the prime numbers up to 120. Just follow these numbered steps.

1. The number 1 is not prime. Cross it out.
2. The number 2 is prime. Circle it. Then cross out every second number—4, 6, 8, 10, and so on.
3. The number 3 is prime. Circle it. Then cross out every third number—6, 9, 12, and so on.
4. The number 4 is crossed out. Go to the next number that is not crossed out.
5. The number 5 is prime. Circle it. Then cross out every fifth number—10, 15, 20, 25, and so on.
6. Continue crossing out numbers as described in Steps 2–5. The numbers that remain at the end of this process are prime numbers.
7. **CHALLENGE** Look at the prime numbers that are circled in the chart. Do you see a pattern among the prime numbers that are greater than 3? What do you think the pattern is?

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

Chapter 1 Classwork/
Review

Name _____

Period _____

Identify each number as prime P or Composite, C.

① 56

② 17

③ 57

④ 33

⑤ 28

⑥ 23

Round each number to the tenths place

⑦ $18.65 =$ _____

⑧ $97.4397 =$ _____

Write the next 3 numbers in each pattern.

⑨ 22, 28, 34, _____, _____, _____

⑩ 57, 49, 41, _____, _____, _____

Write an expression for each

⑪ The difference between eighty-two and forty-one

⑫ Twice the sum of six and seventy-one

13) Find the perimeter



$P =$ _____

14) Write as an exponent: $4 \times 4 \times 4 =$ _____

15) 5^2 has a value of _____

16) Find the GCF of 8 and 20.

17) Find the LCM of 5 and 40.

Solve the problems. (Watch the signs!)

18) $1.2 + 0.35 =$

19) $1.2 - 0.35 =$

20)
$$\begin{array}{r} 1.2 \\ \times 0.35 \\ \hline \end{array}$$