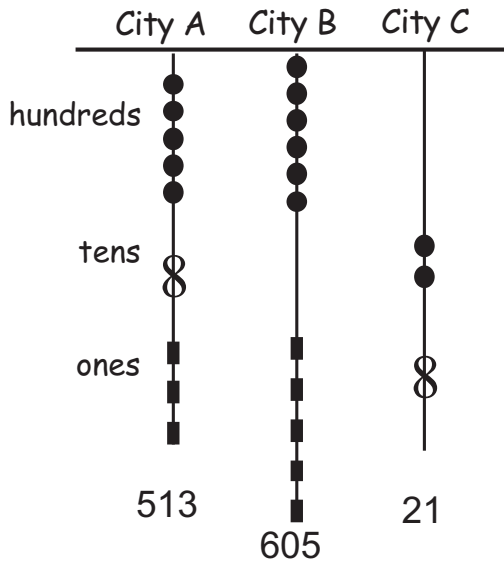


must have at least one ten; that leaves seven ones.

7.



**4—At the Arcade, p. 9**

- 3 coins. Sentence 2. 15 cents.
- 16p  
 1d 6p  
 2n 6p  
 3n 1p  
 1d 1n 1p
- 8p  
 1n 3p
- Mark has nickels (2) and pennies (6) and Luis has pennies (8), since Mark and Luis have the same amount of coins.
- No. If one person has twice as much money, it does not mean that the person has twice as many coins. Coins have different values.
- 2 games. The machine takes only nickels. Mark has 2 nickels and Luis has none, so they can play 2 games.
- 25p                      1q  
 5n                          1d 3n  
 1d 2n 5p                2n 15p  
 2d 5p                      1d 15p  
 3n 10p                    2d 1n  
 4n 5p                      1n 1d 10p  
 1n 20p

- Sentence 10. She had a nickel (1), dime (1) and pennies (10). (She had 12 coins that add to 25 cents.)
- One. She had only one nickel.

**5—The Sieve of Eratosthenes, p. 11**

(On the chart, the prime numbers should be circled. They are as follows:) 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, and 97.

82.  $276 - 194 = 82$ . Sentences 3 and 4.
- A composite number is any number after 1 that has factors other than 1 and itself.
- d.
- All the multiples of 5 end with 5 or 0.
- The multiples of 11 are found along the same diagonal: 11, 22, 33, etc., OR they have the same two digits on the table. (This last fact is true only for multiples of 11 less than 100.) You can tell by drawing a line diagonally down to the right, starting at 11.
- The number 200 is not prime because it has many factors. (We can see that it is divisible by 2, for example.)

**6—Miguel's Memory Games, p. 13**

- 11 years old. Sentence 5.
- Emily. Sentence 4.
- a. E, 11, G, 15, I, 19, K, 23, M, 27, O, 31  
 b. Miguel. Miguel lost because he should have skipped 29 and said 31 after 27.
2. Sentence 11.
- A prime number is any number after 1 with only two factors, 1 and itself.
- A composite number is a number after 1 that has more than 2 different factors.
- a. 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59.  
 b. Miguel. He made a mistake because