Additional Practice *(continued)*

3. Jack plays on a basketball team after school (or on the weekend) every third day of the month. He babysits his younger brother after school every seventh day of the month. How many times during a 30-day month, if any, will Jack have a conflict between basketball and babysitting? Explain your reasoning.

4. Suppose you have two different numbers which are both prime.
   a. What is the least common multiple of the numbers? Explain your reasoning.

   b. What is the greatest common factor? Explain your reasoning.

5. Find the least common multiple and the greatest common factor for each pair of numbers:
   a. 8 and 12 b. 7 and 15 c. 11 and 17 d. 36 and 108

   e. For which pairs in parts (a)–(d) is the least common multiple the product of the two numbers? Why is this so? What is special about the numbers in these pairs?

6. Find the greatest common factor of each pair of numbers:
   a. 4 and 12 b. 5 and 15 c. 10 and 40 d. 25 and 75

   e. When is the greatest common factor of two numbers one of the two numbers? Explain your reasoning.