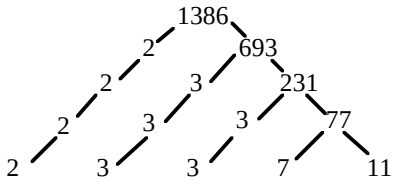
ALGEBRA 1 CONCEPTS AND SKILLS
CHAPTER 8, MAINTAINING SKILLS, EXTRA EXAMPLES

Extra Example 1 Write the Prime Factorization of a Number

Write the prime factorization of 1386.

SOLUTION

Use a tree diagram to factor the number until all the factors are prime. To determine the factors, test the prime numbers in order.



ANSWER ➧ The prime factorization of 1386 is $2 \cdot 3 \cdot 3 \cdot 7 \cdot 11$. This may also be written as $2 \cdot 3^2 \cdot 7 \cdot$

Try These

Write the prime factorization of the number.

1. 27 **2.** 42 **3.** 108 **4.** 2205

Extra Example 2 Rewrite Improper Fractions as Mixed Numbers

Rewrite the improper fraction as a mixed number. **a.** $\frac{27}{5}$ **b.** $\frac{46}{6}$

SOLUTION

a. $\frac{27}{5}$ = $27 \div 5$ Write fraction as a division problem.

= 5 remainder 2 Divide 27 by 5.

= $5\frac{2}{5}$ Write remainder over divisor as a division problem.

a. $\frac{46}{6}$ = $46 \div 6$ Write fraction as a division problem.

= 7 remainder 4 Divide 46 by 6.

= $7\frac{4}{6}$ Write remainder over divisor as a division problem.

= $7\frac{2}{3}$ Reduce fraction.

Try These

Rewrite the improper fraction as a mixed number.

5. $\frac{29}{6}$ **6.** $\frac{23}{7}$ **7.** $\frac{96}{10}$ **8.** $\frac{35}{14}$

ANSWERS - CHAPTER 8, MAINTAINING SKILLS, EXTRA EXAMPLES

1. 3^3

2. $2 \cdot 3 \cdot 7$

3. $2^2 \cdot 3^3$

4. $5 \cdot 3^2 \cdot 7^2$

5. $4\frac{5}{6}$

6. $3\frac{2}{7}$

7. $9\frac{3}{5}$

8. $2\frac{1}{2}$