Reteaching 4-3 Prime Factorization and **Greatest Common Factor**

Find the GCF of 36 and 54.

$$36 = 2^{2} \cdot 3^{2} = 2 \cdot 2 \cdot 3 \cdot 3$$

$$54 = 2 \cdot 3^{3} = 2 \cdot 3 \cdot 3 \cdot 3$$

write the prime factorization

find the common factors

GCF =
$$2 \cdot 3 \cdot 3 = 2 \cdot 3^2 = 18$$

Notice 2 is the lesser power of 2^2 and 2, and 3^2 is the lesser power of 3^2 and 3^3 .

Find the GCF.