1. Add the biased exponents of the two numbers, subtracting the bias from the sum to get the new biased exponent

2. Multiply the significands

3. Normalize the product if necessary, shifting it right and incrementing the exponent

4. Round the significand to the appropriate number of bits

5. Set the sign of the product to positive if the signs of the original operands are the same; if they differ make the sign negative

Overflow or underflow?

Still normalized?

Done

FIGURE 3.17  Floating-point multiplication. The normal path is to execute steps 3 and 4 once, but if rounding causes the sum to be unnormalized, we must repeat step 3. Copyright © 2009 Elsevier, Inc. All rights reserved.