**Chapter 1 Expressions and Exponents**

**Learning Target 4: Negative Exponents**



 **Simplify *y*–1 • *y*4.**

*y*−1 • *y*4 = *y*(−1 + 4) Product of powers

= *y*3 Simplify.



**STEM The mass of a molecule of penicillin is 10–18 kilogram and the mass of a molecule of insulin is 10–23 kilogram. How many times greater is the mass of a molecule of penicillin than the mass of a molecule of insulin?**

To find how many times greater, divide 10−18 by 10−23.

= 10−18 − (−23) Quotient of powers

 = 105 or 100,000 times Simplify.