



Problem 1 – Discovering Exponent Rules

Conjecture rules for each of the following and check your conjecture on the page that follows:

	RULE
Page 1.2—Product of two powers with like bases	
Page 1.4—Quotient of two powers with like bases	
Page 1.6—Power of a power	
Page 1.8—Powers with a negative exponent	
Page 1.10—Powers with a zero exponent	
Page 1.12—Power of a product	
Page 1.14—Power of a quotient	

Problem 2 – Extension: Rational Exponent with Numerator of 1

- Use page 2.2 to find the value of the five expressions shown on page 2.1 and write the solutions below.

1. $36^{\left(\frac{1}{2}\right)}$

2. $8^{\left(\frac{1}{3}\right)}$

3. $49^{\left(\frac{1}{2}\right)}$

4. $16^{\left(\frac{1}{2}\right)}$

5. $16^{\left(\frac{1}{4}\right)}$

- Complete this rule and check your result on page 2.3: $x^{\left(\frac{1}{n}\right)} = \underline{\hspace{2cm}}$