**7-1 Notes: *Multiplication Properties of Exponents***

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_OR \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Multiply Monomials** A **monomial** is a number, a variable, or the product of a number and one or more variables with nonnegative integer exponents. An expression of the form is called a **power** and represents the product you obtain when *x* is used as a factor *n* times. To multiply two powers that have the same base, add the exponents.

|  |  |
| --- | --- |
| **Product of Powers** |  |

**Example 1: Simplify (3)(5).**

**Example 2:** **Simplify (–4*b*)(3).**

**Exercises**

**Simplify each expression.**

**1.** *y*() **2.**  ⋅ **3.** (–7)()

**4.** (2)(8*a*)**5.** (*rn*)(*r*)()**6.** (*y*)(4*x*)

**7-1 Notes: *Multiplication Properties of Exponents***

**Simplify Expressions** An expression of the form is called a **power of a power** and represents the product you obtain when is multiplied *n* times. To find the power of a power, **multiply exponents**.

|  |  |
| --- | --- |
| **Power of a Power** |  |
| **Power of a Product** |  |

We can combine and use these properties to simplify expressions involving monomials.

**Example 1: Simplify ()4.**

**Example 2: Simplify**

**Exercises**

**1.**  **2.**  **3.** ()

**4.** –3 **5.** **6.**

**7.** () **8.** () **9.**