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| **What is an exponent?** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_ 43 \_\_\_\_\_\_\_\_\_\_\_  **EX:** 1) 53 2) -62 3) (-6)2 4) | E X P O N E N T S | **Zero Exponent Rule:** Any non-zero number or variable raised to a power of zero will equal one.  Think: = 1) 90 =  = x = 2) -60 =  3) (-6)0 = |
| **Product Rule:** Multiply like or same bases. Keep the base and add their exponents.  Think: 23 ⋅ 24 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = 2  EX: 1) 62 ⋅ 63 = 2) x3 ⋅ x5 =  3) y3 ⋅ y-5 ⋅ y4 = 4) 5 ⋅ 58 ⋅ 53 =  5) 3y4 ⋅ 6y-2 ⋅ y = | **Power Rule:** when a power is raised to another power, then multiply both powers. (parentheses)  Think: (43)2 = \_\_\_\_\_ ⋅ \_\_\_\_\_ = 4  EX: 1) (25)2 = 2) (t4)3 =  3) (3x4)3 = 4) (2x4y2)3 = |
| **Quotient Rule:** Divide like or same bases. Keep the base and subtract their exponents. Top minus the bottom.  EX: 1) = 2) =  3) = 4) =  or cancel: = ---------------------------------------- = 6 | **Negative Exponent Rule:** Move the base and the negative exponent to the bottom or top of a fraction and change to a positive exponent.  EX: 1) 2x-3 = = 2) =  3) = 4) 12-3 = |

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| Zero  Exponent  Rule | Tape here  to paper | Basics |
| Power  Rule | Product  Rule |
| Negative  Exponent  Rule | Quotient  Rule |