**Exponential Functions: Unit Summary**

Required Skills

Be able to:

1. Apply all seven exponent laws from grade 9/10 in multiple contexts.

2. Evaluate powers with rational exponents without using a calculator.

3. Solve exponential equations using multiple techniques; use a common

 base, trial and error/logarithms, substitute n = 2x, etc…

4. Graph exponential functions using transformations represented by values

 assigned to the constants k, d, a, and c. A table of values will be provided

 for parent functions.

5. Determine is a relationship is linear, quadratic, exponential or none of

 these from a table of values.

6. Create and apply exponential functions to solve real-world problems:

|  |  |
| --- | --- |
| Exponential Growth | $$y=a(1+r)^{x}$$ |
| Exponential Decay | $$y=a(1-r)^{x}$$ |
| Doubling Time | $$y=a(2)^{\frac{t}{d}}$$ |
| Half-Life Time | $$y=a(0.5)^{\frac{t}{h}}$$ |

 Ensure that t and d or t and h are in the same units of time when using the

 latter two equations.

Practice: Exponentials Review Worksheet +

 pg 267 # 1, 2, 3, 4ace, 5ace, 7ace, 8ace, 9ace, 10, 11bc,
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 pg 270 (if more practice needed).