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| Unit 6: Exponential Functions |
| **Day 1** | **Linear vs. Quadratic vs. Exponential Functions** |
| Learn-ing Goals | I can identify the differences from a graph. | 1 | 2 | 3 |
| I can identify the differences from a table of values. | 1 | 2 | 3 |
| I can identify the differences from an equation. | 1 | 2 | 3 |
| **Day 2** | **Power Laws** |
| Learning Goals | I can apply the multiplying powers law. | 1 | 2 | 3 |
| I can apply the dividing powers law. | 1 | 2 | 3 |
| I can apply the power of a power law. | 1 | 2 | 3 |
| I can apply the zero power law. | 1 | 2 | 3 |
| I can apply the negative power law. | 1 | 2 | 3 |
| **Day 3** | **Rational Exponents** |
| Learning Goals | I understand what the numerator and denominator mean in an exponent. | 1 | 2 | 3 |
| I can rewrite a rational exponent in radical notation. | 1 | 2 | 3 |
| I can rewrite radical notation as a rational exponent. | 1 | 2 | 3 |
| **Day 4** | **Properties of Exponential Functions** |
| Learning Goals | I can determine the domain and range of an exponential function. | 1 | 2 | 3 |
| I can determine the asymptotes of an exponential function. | 1 | 2 | 3 |
| I can determine the intercepts and if the function is increasing/decreasing | 1 | 2 | 3 |
| **Day 5** | **Transformations** |
| Learning Goals | I can identify the transformations of an exponential function. | 1 | 2 | 3 |
| I can graph the transformations of an exponential function. | 1 | 2 | 3 |
| I understand the changes the transformations make on the properties of the graph. | 1 | 2 | 3 |
| **Day 6** | **Solving Exponential Equations** |
| Learning Goals | I can find like bases to solve an exponential equation. | 1 | 2 | 3 |
| I can solve an exponential equation that acts as a quadratic. | 1 | 2 | 3 |
| **Day 6** | **Exponential Growth and Decay** |
| Learning Goals | I know the general form of an exponential and can use it to write an equation. | 1 | 2 | 3 |
| I understand what the base of a growth problem looks like. | 1 | 2 | 3 |
| I understand what the base of a decay problem looks like. | 1 | 2 | 3 |
| **Day 7** | **Review** |
| **Day 8** | **Test** |

**Unit 6 – Exponential Functions**

Day 1 – Linear, Quadratic & Exponentials Handout

 HW Handout

Day 2 – Power Law Review Handout

 Nelson Page 222 #s 4ace, 5bdf, 6bdf, 7ace & 8bdef

Day 3 – Nelson Page 229 #s 1 – 3, 5ace, 6adf & 7 AND Page 236 #s 4 – 6

Day 4 – Properties Handout

 Nelson Page 239 #s 1 – 12, & Page 243 #s 1 & 2

Day 5 – Desmos

 Transformations worksheet Handout – 2 questions per pair

 Nelson Page 251 #s 1, 2, 5, 7, 9 & 10

Day 6 – Exponential Growth and Decay Handout

 Handout #s 1, 2ac, 3aceg, 4aceg, 6ac, 8ace, 9ace, 15 & 17

 **AND** Nelson Page 261 #s 2 – 5 & 10

Day 7 – Review Questions

 Nelson Page 267 #s 2 – 5, 7 & 9 – 17

Day 8 – TEST