**Algebra 2**, Unit 9: Quadratics **#25b**

**Day 25: Linear vs. Exponential vs. Quadratic**

**Look closely at these TABLES. Describe any patterns you notice.**

|  |  |
| --- | --- |
| These have a linear relationship: Describe patterns: | These have an exponential relationship:Describe patterns: |
| These have a quadratic relationship: | Explain how you can identify if a relationship is linear, exponential, or linear from a table of values? |

**Look closely at these GRAPHS.**



Explain how you can tell if a graph is linear, exponential, or quadratic.

**Equations**

|  |  |  |
| --- | --- | --- |
| These are linear equations:y = $-\frac{1}{2}x+8$2x + 3y = -15x = 5 | These are exponential equations:$y=3^{x}$$y=4⋅(0.8)^{x}$$y=7(\frac{3}{2}\_{})^{x}+2$ | These are quadratic equations:$y=x^{2}$$y=2x^{2}-4x+6$$f(x)=3(x-4)^{2}+7$ |
| Explain how you can tell if an equation is linear, exponential, or quadratic. |

**Look closely at TILE PATTERNS. Figure out which is linear, exponential, and quadratic.**





**Explain how you can tell if a TILE PATTERN is linear, exponential, or quadratic.**

**Bonus: Write a rule for each pattern. Describe what the variables in your rule stand for.**

**Spicy Bonus: Which pattern will exceed 10,000 first? How do you know? What about last?**