Name: Date:

11.6 Notes

|  |  |
| --- | --- |
| **Direct Variation** | **Inverse Variation** |
|  |  |

|  |
| --- |
| What does every equation need?  |

**Example 1: Writing an Equation**

 Suppose y varies inversely with x, and y = 8 when x = 3. What is the equation for the inverse variation?

1. Suppose y varies inversely with x, and y = 8 when x = 3. What is the equation for the inverse variation?

**Example 2: What is happening graphically?**

Use the equation to fill out the table: $y= \frac{18}{x}$

|  |  |
| --- | --- |
| x | y |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**Example 3:** Graphing $y= \frac{8}{x}$

|  |  |
| --- | --- |
| x | y |
| -8 |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| 8 |  |

3.Graphing $y= \frac{-4}{x}$

|  |  |
| --- | --- |
| x | y |
| -8 |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| 8 |  |



**Example 4: Word Problem** $w\_{1}∙d\_{1}=w\_{2} ∙ d\_{2}$

3. A 1,000lb elephant is 15 feet from a fulcrum and the trainer weighing 175 lbs is balanced across. How far away from the fulcrum should the trainer stand?

**Example 5: Writing Equations**





5.

|  |
| --- |
| **Strategies + Patterns to Look For** |
|  |  |

**Example 6:**

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**6.**

