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| **Cornell Notes** | **Topic/Objective:** Unit 2: Modeling a Business | **Name:** |
| Chapter 2.5: Graphs of Expense & Revenue  | **Class/Period:** |
| Functions (p.86 - 89) | **Date:** |
| **Essential Question:** How can expense and revenue be graphed to highlight the relationship between price, demand, |
| expense, and revenue? |
| **Questions:** | **Notes:** |
| What is the equation of a  | Equation: |
| second-degree (quadratic)  |  |
| revenue function? |  |
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| What makes the revenue | Draw the graph: The parabola opens downward |
| function open downward? |  because… |
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| What is the vertex of the | Show the vertex on a graph: The vertex is the place where… |
| revenue function? |  |
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| What is the axis of | Draw the graph: The point at which the axis of symmetry |
| symmetry of a parabola? |  passes through the horizontal axis is |
|  |  calculated by: |
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| **Summary:** |
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| **Questions:** | **Notes:** |
| How do you write the revenue  | **Example 2:** The demand function is: *q = – 500p + 30,000* |
| function in terms of price? | *Revenue = pq* |
|  | *Revenue = p(– 500p + 30,000)* substitute in for *q* |
|  | *Revenue =*  distribute |
|  | *Revenue =*  simplify |
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| How do you graph the revenue | **Example 3:** The parabola opens downward. Why? |
| function? |  |
|  | Where does the axis of symmetry cross the horizontal axis? |
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|  | What is the vertex of the parabola (maximum value of revenue)? |
|   | *Revenue =*  revenue equation |
|  | *Revenue =*  substitute p = 30 |
|  | *Revenue =*  simplify |
|  | Interpret this value: When the price is $30, the maximum revenue is $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |
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| How do you interpret the points | Example 4: If the expense and revenue functions intersect at p = 8.08 and p = 58.92, |
| of intersection between the | interpret the meaning of these intersection points & copy the graph from the book. |
| expense & revenue functions? | pricedollars |
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| **Summary:** |
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