$\qquad$ Date $\qquad$ Period $\qquad$
WS 4-4 - Interpreting Graphs
Write your ANSWERS on this page

2.


| Linear? |  |
| :---: | :--- |
| $x$-intercept(s) |  |
| $y$-intercept(s) |  |
| Positive |  |
| Negative |  |
| Increasing |  |
| Decreasing |  |
| Extrema |  |
| As $\boldsymbol{x}$ decreases, $\boldsymbol{y} \ldots$ |  |
| As $\boldsymbol{x}$ increases, $\boldsymbol{y} \ldots$ |  |


| Linear? |  |
| :---: | :--- |
| $x$-intercept(s) |  |
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| Positive |  |
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| As $\boldsymbol{x}$ decreases, $\boldsymbol{y} \ldots$ |  |
| As $\boldsymbol{x}$ increases, $\boldsymbol{y} \ldots$ |  |

3. 



| Linear? |  |
| :---: | :--- |
| $x$-intercept(s) |  |
| $\boldsymbol{y}$-intercept(s) |  |
| Positive |  |
| Negative |  |
| Increasing |  |
| Decreasing |  |
| Extrema |  |
| As $\boldsymbol{x}$ decreases, $\boldsymbol{y} \ldots$ |  |
| As $\boldsymbol{x}$ increases, $\boldsymbol{y} \ldots$ |  |

Sketch a graph of a function that could represent each situation. Identify and interpret the intercepts of the graph, where the graph is increasing and decreasing, and any relative extrema.

| 4. The height of a corn plant from the time the seed is planted until it reaches maturity 120 days later. |  |  |
| :--- | :--- | :--- |
|  | What does the $\boldsymbol{x}$-intercept represent? |  |
|  | What does the $\boldsymbol{y}$-intercept represent? |  |
|  | When is it increasing? |  |
|  | When is it decreasing? |  |
|  | What are the extrema? |  |

5. The height of a football from the time it is punted until it reaches the ground 2.8 seconds later.

|  | What does the $x$-intercept represent? |  |
| :---: | :---: | :--- |
|  | What does the $y$-intercept represent? |  |
|  | When is it increasing? |  |
|  | When is it decreasing? |  |
|  | What are the extrema? |  |

6. The balance due on a car loan from the date the car was purchased until it was sold 4 years later.

| $\boldsymbol{4}$ | What does the $x$-intercept represent? |  |
| :---: | :---: | :--- |
|  | What does the $y$-intercept represent? |  |
|  | When is it increasing? |  |
|  | When is it decreasing? |  |
|  | What are the extrema? |  |

Use the "WS 4-4 - Questions" paper to complete the following questions.


