

Name: _____

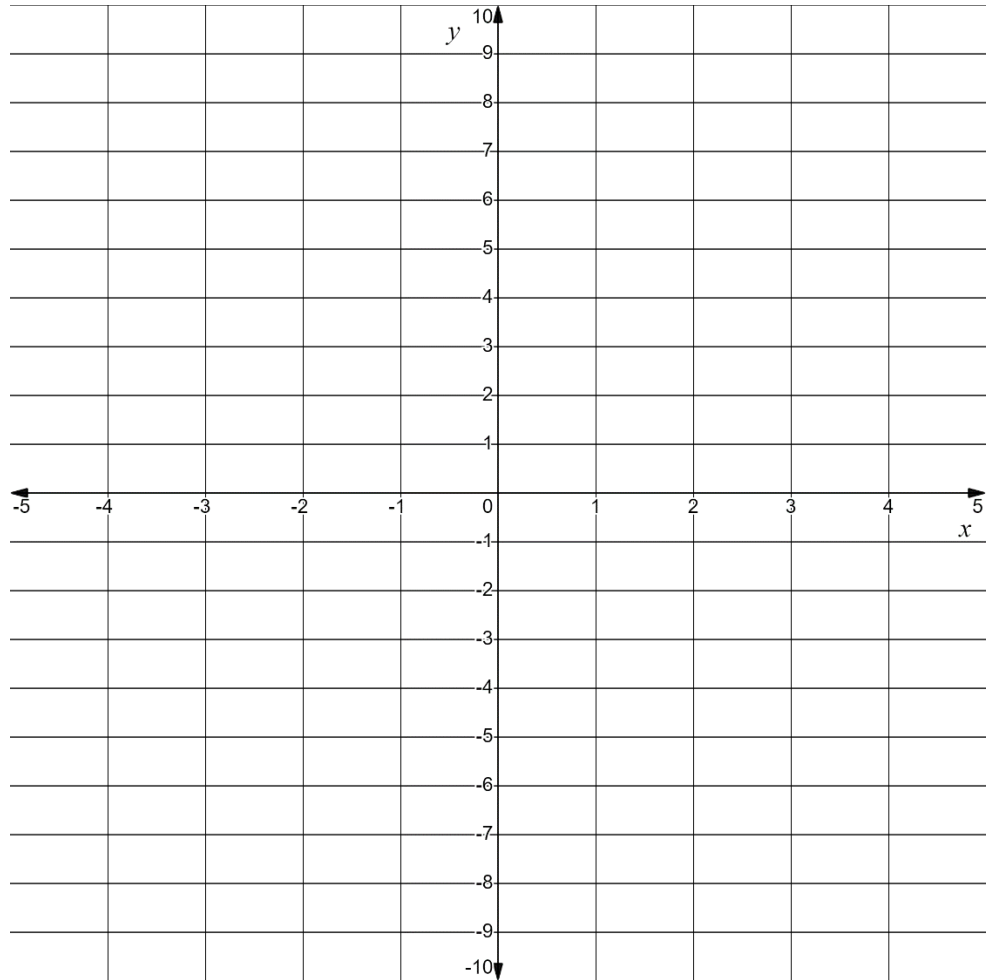
Date: _____

| | |
|--------------------------|--|
| Learning Goal 3.3 | Solving equations algebraically and graphically. |
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Example Consider the function $f(x) = -x^3 - 5x^2 - 3x + 9$ and without the use of technology, determine the following attributes.

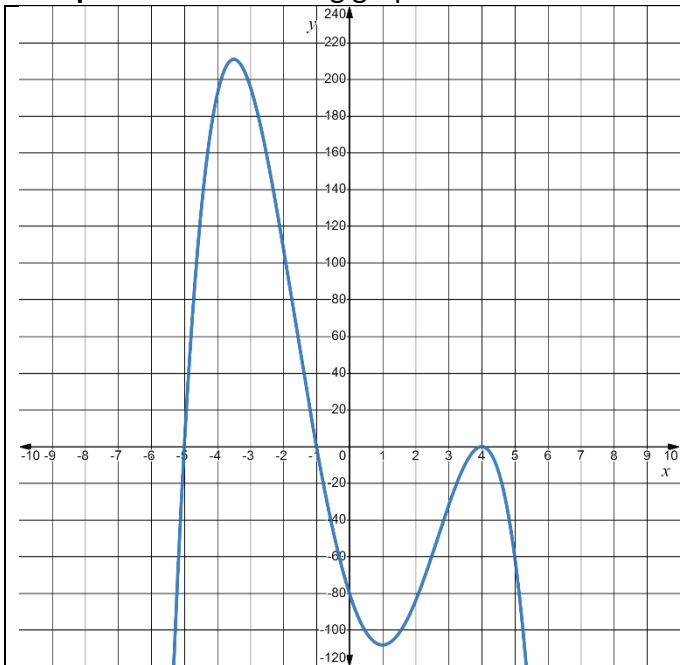
| Degree | Leading Coefficient | y – intercept value | x – intercept value(s) |
|--|---------------------|--|------------------------|
| | | | |
| Interval(s) where the function is positive | | Interval(s) where the function is negative | |
| | | | |

Use the information from the previous page to **sketch** the graph.



Use technology to draw the graph.

Example For the following graph fill out the tables.



| |
|--|
| Least possible degree |
| Sign of the leading coefficient |
| x – intercepts and the factors of the function |
| Intervals where positive and negative |

