Name _____ Date _____ Class _____

LESSON 6-7

Practice B

Investigating Graphs of Polynomial Functions

Identify the leading coefficient, degree, and end behavior.

1. $P(x) = 2x^5 - 6x^3 + x^2 - 2$

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2. $Q(x) = -4x^2 + x - 1$

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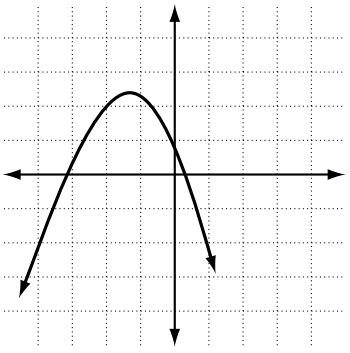
Identify whether the function graphed has an odd or even degree and a positive or negative leading coefficient.

3.



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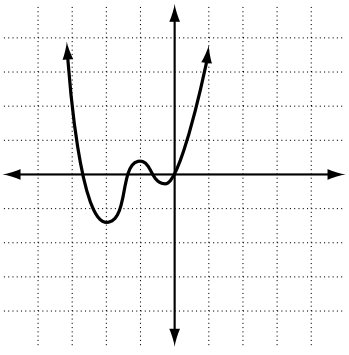
4.



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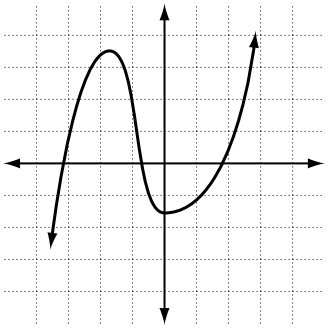
5.



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Graph the function $P(x) = x^3 + 6x^2 + 5x - 12$.

6. Identify the possible rational roots.

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7. Identify the zeros.

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8. Describe the end behavior of the function.

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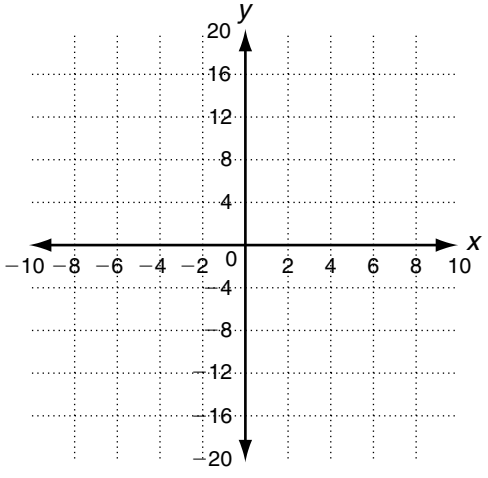
9. Sketch the graph of the function.



Solve.

10. The number, $N(y)$, of subscribers to a local magazine can be modeled by the function $N(y) = 0.1y^4 - 3y^3 + 10y^2 - 30y + 10{,}000$, where y is the number of years since the magazine was founded. Graph the polynomial on a graphing calculator and find the minimum number of subscribers and the year in which this occurs.

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