

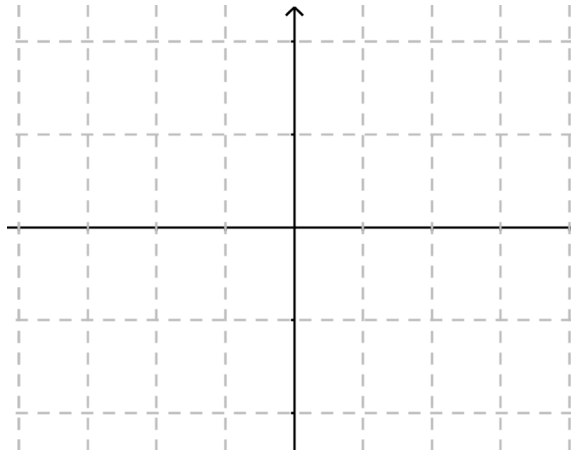
Polynomials 3a – Zeros & Repeated Zeros
Homework #6

Name _____
Per _____ Date _____

Sketch a possible graph for each of the following polynomial functions based on the given information.

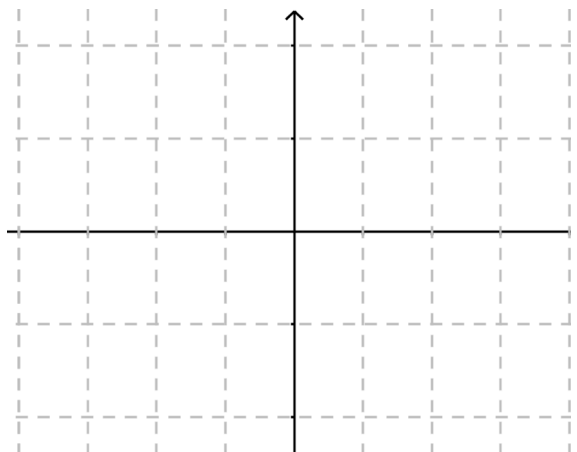
1. f is a polynomial function such that

- its degree is even
- its leading coefficient is positive
- its constant term is negative
- it has zeros only at $x = -4$, $x = -3$, $x = -1$ and $x = 2$



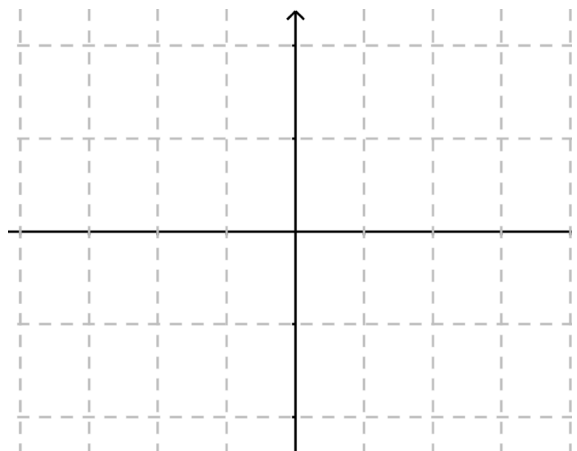
2. f is a polynomial function such that

- its degree is odd
- its leading coefficient is negative
- its constant term is negative
- it has zeros only at $x = -5$, $x = -4$, $x = -1$, $x = 1$ and $x = 3$



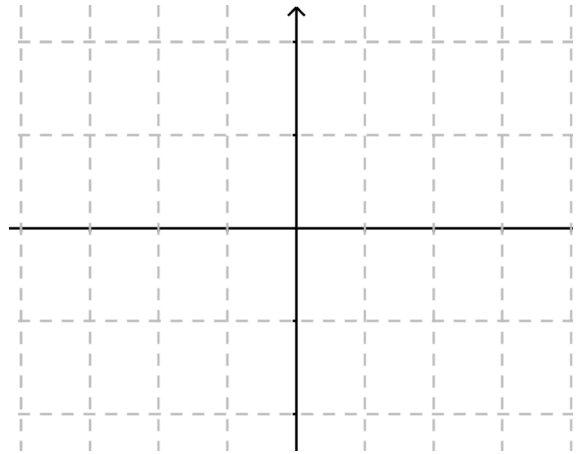
3. f is a polynomial function such that

- its degree is even
- its leading coefficient is positive
- its constant term is positive
- it has zeros only at $x = 1$, $x = 2$, $x = 3$ and $x = 4$



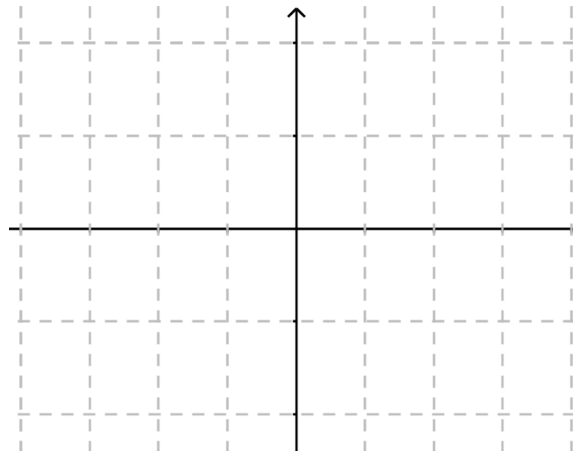
4. f is a polynomial function such that

- its degree is even
- its leading coefficient is negative
- it has zeros only at $x = 1$ and $x = 4$, where $x = 4$ has multiplicity 3.



5. f is a polynomial function such that

- its degree is odd
- its leading coefficient is positive
- it has zeros only at $x = -4$ and $x = 2$, where $x = -4$ has multiplicity 3 and $x = 2$ has multiplicity 2.



6. f is a polynomial function such that

- its degree is even
- its leading coefficient is positive
- it has zeros only at $x = -4$, $x = -1.5$ and $x = 2$, where $x = -4$ has multiplicity 2, and $x = -1.5$ has multiplicity 3.

