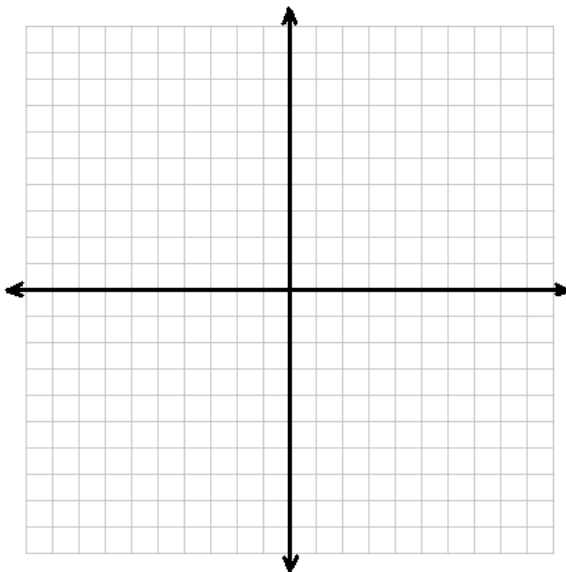


Characteristics of Polynomial Functions 2 – in book: Section 7.1 p. 438

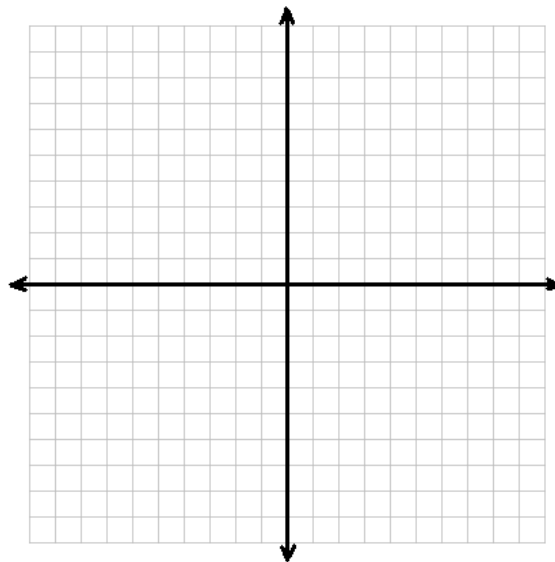
For each of the following: Factor, find the zeros, find where the graph is increasing and decreasing, sketch graph and estimate extrema.

1. $f(x) = x^4 - 4x^2$



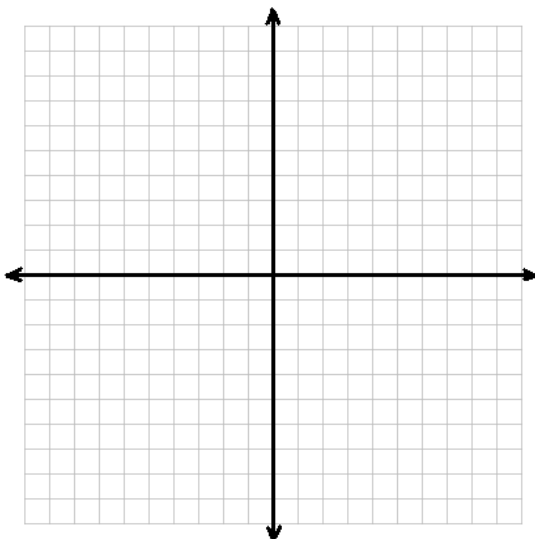
Zeros:
Extrema:
Increasing:
Decreasing:

2. $f(x) = x^3 + 4x^2 - x - 4$



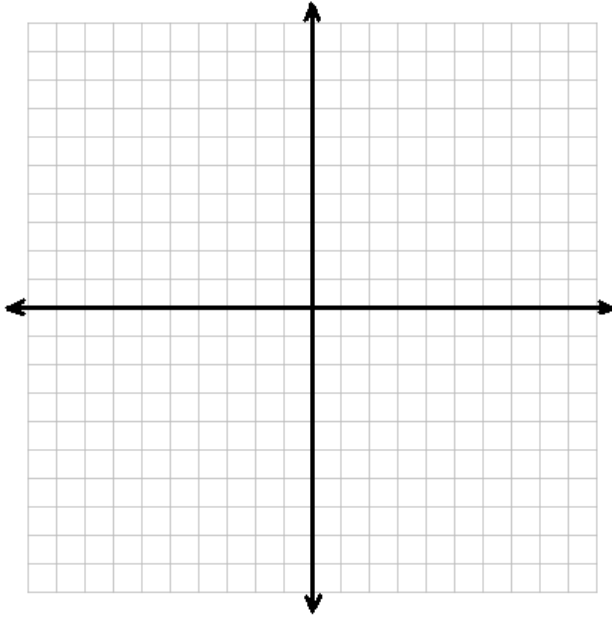
Zeros:
Extrema:
Increasing:
Decreasing:

3. $f(x) = x^4 - 16x^3 + 64x^2$



Zeros:
Extrema:
Increasing:
Decreasing:

4. $f(x) = x^5 - 5x^3 + 6x$



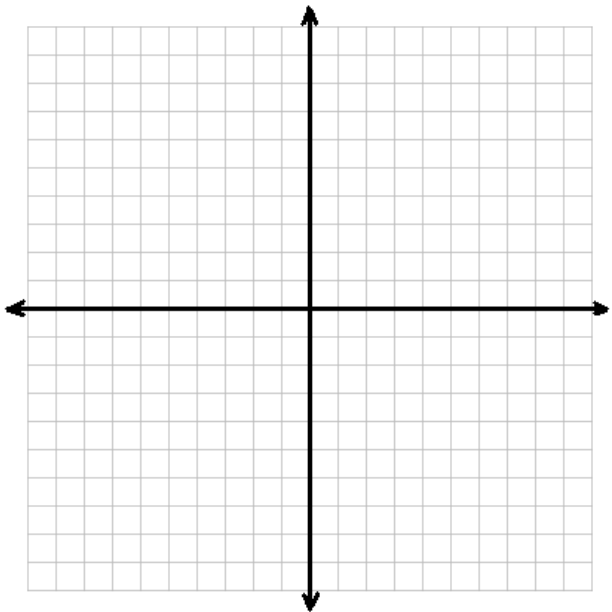
Zeros:

Extrema:

Increasing:

Decreasing:

5. $f(x) = x^4 + 6x^3 + 9x^2$



Zeros:

Extrema:

Increasing:

Decreasing: