

Graphing Polynomials

1. Given $2x^3 + x^2 - 13x + 6$ and $(x - 2)$ is a factor.

a) List the zeros.

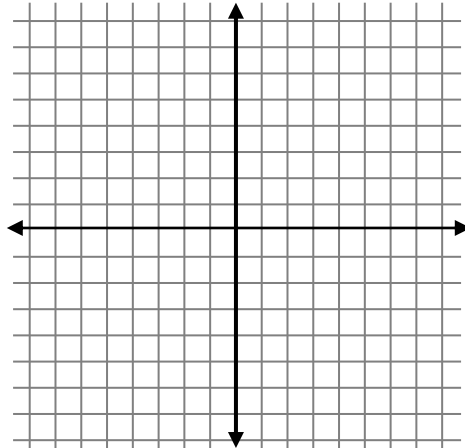
b) Factor completely.

c) As $x \rightarrow \infty, y \rightarrow \underline{\hspace{2cm}}$

d) Find the y – intercept.

As $x \rightarrow -\infty, y \rightarrow \underline{\hspace{2cm}}$

e) Sketch the graph.



2. Given $x^3 - 13x + 12$ and $f(3) = 0$.

a) List the zeros.

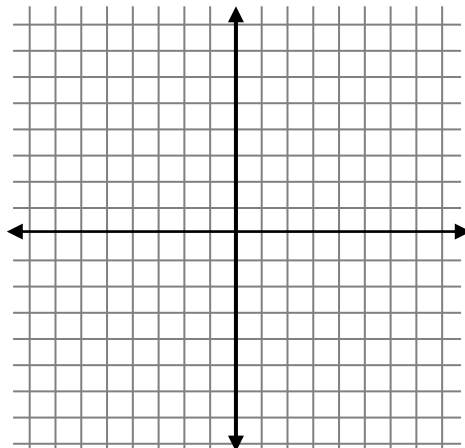
b) Factor completely.

c) As $x \rightarrow \infty, y \rightarrow \underline{\hspace{2cm}}$

d) Find the y – intercept.

As $x \rightarrow -\infty, y \rightarrow \underline{\hspace{2cm}}$

e) Sketch the graph.



3. Given $x^3 - 3x^2 - 4x$.

a) List the zeros.

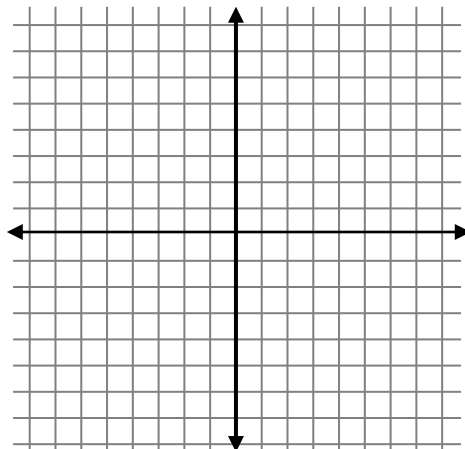
b) Factor completely.

c) As $x \rightarrow \infty, y \rightarrow$ _____

d) Find the y – intercept.

As $x \rightarrow -\infty, y \rightarrow$ _____

e) Sketch the graph.



4. Given $x^4 - 6x^3 + 14x^2 - 54x + 45$ and $(x - 5)$ & $(x - 1)$ are factors.

a) List the zeros.

b) As $x \rightarrow \infty, y \rightarrow$ _____

c) Find the y – intercept.

As $x \rightarrow -\infty, y \rightarrow$ _____

d) Sketch the graph.

