

Companion Notes for MATH 229 Section 12.3.

1. Sketch the graph of $y = f(x) = x^3 - 9x^2 + 24x - 10$.

(a) Determine the Domain of f .

(b) Find the x and y intercepts.

(c) End Behavior.

(d) Find Asymptotes

(e) Determine the intervals where $f(x)$ is increasing or decreasing.

(f) Find relative extrema of $f(x)$

(g) Determine concavity of $f(x)$.

(h) Find inflection points.

(i) Graph

2. Sketch the graph of $y = g(x) = \frac{x + 4}{x - 2}$.

(a) Determine the Domain of f .

(b) Find the x and y intercepts.

(c) End Behavior.

(d) Find Asymptotes

(e) Determine the intervals where $f(x)$ is increasing or decreasing.

(f) Find relative extrema of $f(x)$

(g) Determine concavity of $f(x)$.

(h) Find inflection points.

(i) Graph