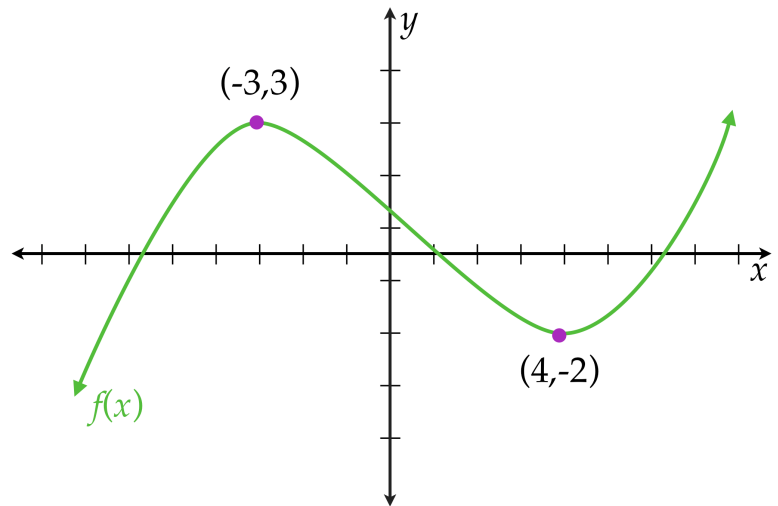


Intervals of a Polynomial

Increasing Intervals

Decreasing Intervals

Turning Points



Correlation between Degree of a Polynomial and the number of Turning Points for a Polynomial.

If a polynomial $f(x)$ has a degree of n , then $f(x)$ has at most $n - 1$ turning points.

$$f(x) = x^3 - 2x^2 - 29x + 30$$

$$f(x) = 4x^5 - x^4 + 18x$$

$$f(x) = x^2 + 2x + 1$$

Correlation between Degree of a Polynomial and the number of Turning Points for a Polynomial.

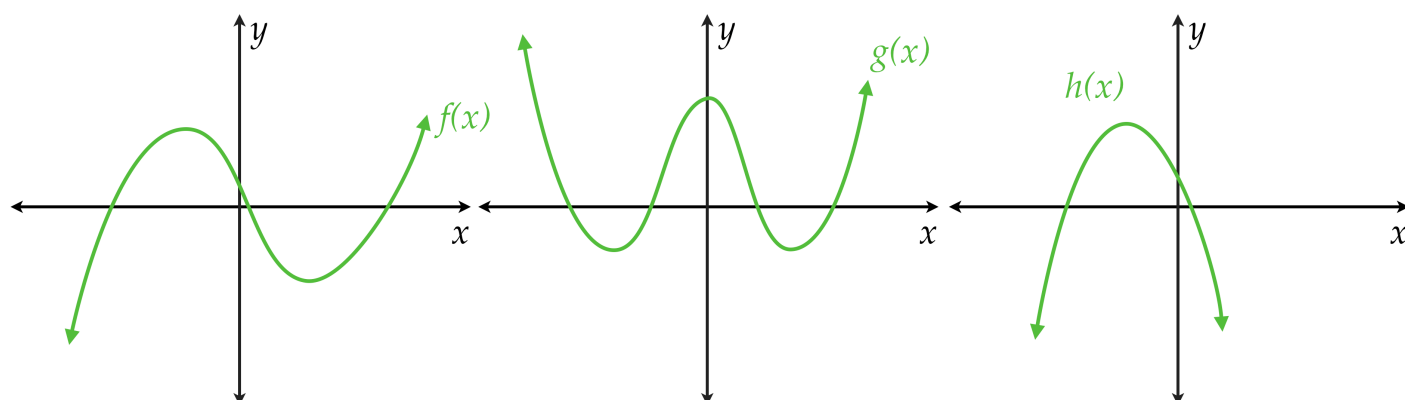
If a polynomial $f(x)$ has a n turning points, then the degree of $f(x)$ is at least $n + 1$.

$f(x)$ has 4 turning points

$f(x)$ has 1 turning point

$f(x)$ has 3 turning points

What can you conclude about the Degree of the following Polynomials?



Intervals of a Polynomial

Turning Points

any point for which the graph changes direction

If a polynomial $f(x)$ has a degree of n , then $f(x)$ has at most $n - 1$ turning points.

If a polynomial $f(x)$ has a n turning points, then the degree of $f(x)$ is at least $n + 1$.

