

$f(x) = -6x^3 + 7x^2 + 3x + 1$
 Determine the end behavior of f .

As $x \rightarrow \infty$, $f(x) \rightarrow -\infty$
 As $x \rightarrow -\infty$, $f(x) \rightarrow \infty$

x-intercepts of polynomial function.

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Ex. $f(x) = (x-2)(x+1)(x-4)$
 leading term x^3 .

$(x-2)(x+1)(x-4) = 0$
 $x = 2, -1, 4$

3: x-intercepts.
 2 turning points

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intercepts and turning points of polynomial functions.

If a polynomial function has degree n , then
 it has at most n x-intercepts, and
 at most $n-1$ turning points

degree of this polynomial function ≥ 4

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