II. Get ready:

Factoring: \(3x^2 - 8x - 3 = 0\)

Solve by S:

\[
(3x + 1)(x - 3) = 0
\]

\[
\therefore x = -\frac{1}{3},\quad x = 3
\]

{\(-\frac{1}{3}, 3\)}

III. Question from Class - §3.1: p. 262: #37

A. Determine the "END BEHAVIOR" of \(P\).

(Graphing)

\[P(x) = 3x^3 - x^2 + 5x + 1\quad Q(x) = 3x^3\]

Ans.: By \(T8-4\), \(T1-84\)

\[\text{As } x \to \infty, \quad P(x) \to \infty\]

"As \(x\) increases, \(P(x)\) increases"

and as \(x \to -\infty, \quad P(x) \to -\infty\)

"As \(x\) decreases, \(P(x)\) decreases."

B. Follow-up: Determine the end behavior of

\[P(x) = x^4 - 7x^3 + x\]

As \(x \to \infty, \quad P(x) \to \infty\) and as \(x \to -\infty, \quad P(x) \to \infty\)