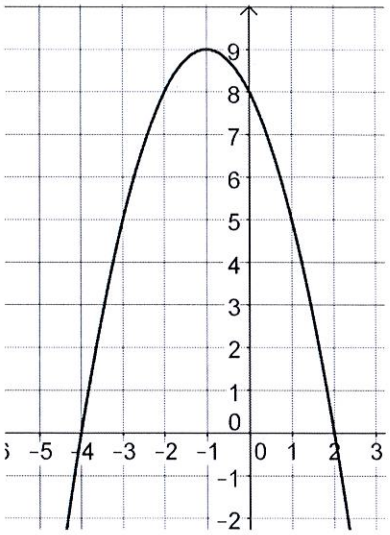
Key

$f(x) = -x^2 - 2x + 8$



Domain: $(-\infty, \infty)$ Range: $(-\infty, 9]$

Zeros: $-4, 2$ Y-int: $(0, 8)$

Rel. Max: $(-1, 9)$ Rel. Min: NONE

Abs. Max: $(-1, 9)$ Abs. Min: NONE

Inc: $(-\infty, -1)$ Dec: $(-1, \infty)$

Even, Odd or Neither?: neither

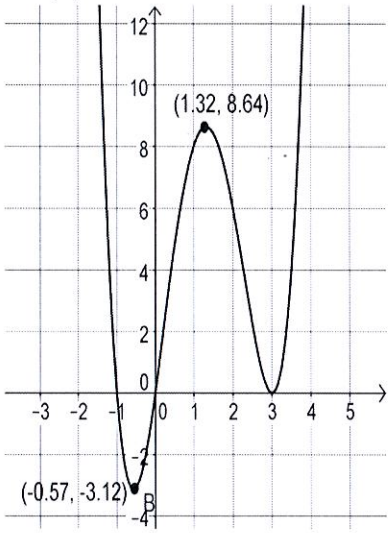
$x \to \infty$, $f(x) \to -\infty$

$x \to -\infty$, $f(x) \to -\infty$

Degree (Name): quadratic

Number of Terms (name): trinomial

$f(x) = x^4 - 5x^3 + 3x^2 + 9x$



Domain: $(-\infty, \infty)$ Range: $[-3.12, \infty)$

Zeros: $-1, 0, 3, 3$ Y-int: $(0, 0)$

Rel. Max: $(1.32, 8.64)$ Rel. Min: $(3, 0)$ $(-.57, -3.12)$

Abs. Max: NONE Abs. Min: $(-.57, -3.12)$

Inc: $(-.57, 1.32) \cup (3, \infty)$ Dec: $(-\infty, -.57) \cup (1.32, 3)$

Even, Odd or Neither?: neither

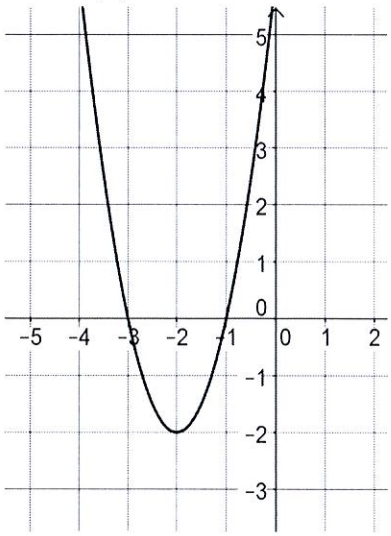
$x \to \infty$, $f(x) \to \infty$

$x \to -\infty$, $f(x) \to \infty$

Degree (Name): **Quartic**

Number of Terms (name): polynomial

$f(x) = 2x^2 + 8x + 6$



Domain: $(-\infty, \infty)$ Range: $[-2, \infty)$

Zeros: $-3, -1$ Y-int: $(0, 6)$

Rel. Max: NONE Rel. Min: $(-2, -2)$

Abs. Max: NONE Abs. Min: $(-2, -2)$

Inc: $(-2, \infty)$ Dec: $(-\infty, -2)$

Even, Odd or Neither?: neither

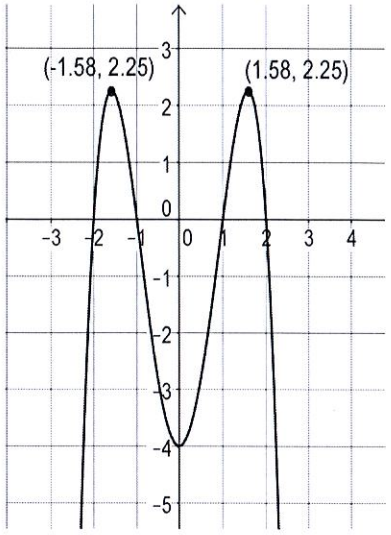
$x \to \infty$, $f(x) \to \infty$

$x \to -\infty$, $f(x) \to \infty$

Degree (Name): **Quadratic**

Number of Terms (name): **Trinomial**

$f(x) = x^4 - 5x^2 + 4$



Domain: $(-\infty, \infty)$ Range: $(-\infty, 2.25]$

Zeros: $-2, -1, 1, 2$ Y-int: $(0, -4)$

Rel. Max: $(-1.58, 2.25)$ $(1.58, 2.25)$ Rel. Min: $(0, -4)$

Abs. Max: $(-1.58, 2.25)$ $(1.58, 2.25)$ Abs. Min: NONE

Inc $(-\infty, -1.58) \cup (0, 1.58)$ Dec $(-1.58, 0) \cup (1.58, \infty)$

Even, Odd or Neither?: **Even**

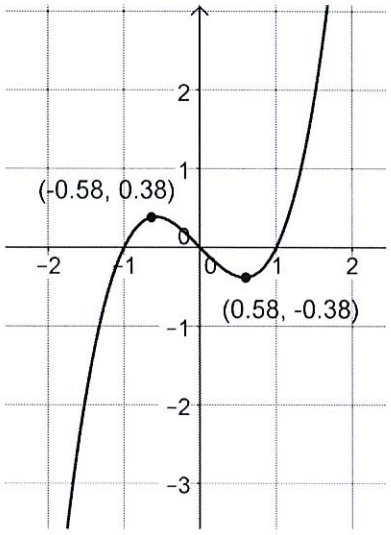
$x \to \infty$, $f(x) \to -\infty$

$x \to -\infty$, $f(x) \to -\infty$

Degree (Name): quartic

Number of Terms (name): **Trinomial**

$f(x) = x^3 - x$



Domain: $\mathbb{R}$ Range: $(-\infty, \infty)$

Zeros: $-1, 0, 1$ Y-int: **(0,0)**

Rel. Max: $(-.58, .38)$ Rel. Min: $(.58, -.38)$

Abs. Max: NONE Abs. Min: NONE

Inc: $(-\infty, -.58) \cup (.58, \infty)$ Dec: $(-.58, .58)$

Even, Odd or Neither?: **Odd**

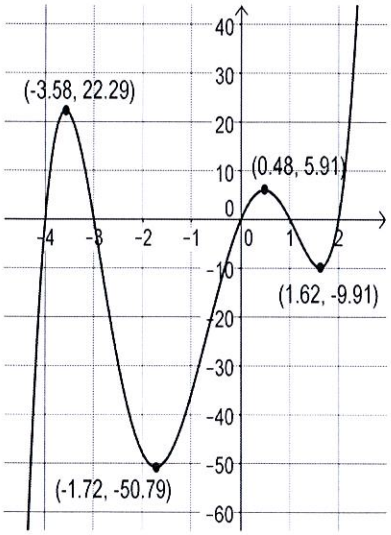
$x \to \infty$, $f(x) \to \infty$

$x \to -\infty$, $f(x) \to -\infty$

Degree (Name): cubic

Number of Terms (name): binomial

$f(x) = x^5 + 4x^4 - 7x^3 - 22x^2 + 24x$



Domain: $(-\infty, \infty)$ Range: $\mathbb{R}$

Zeros: $-4, -3, 0, 1, 2$ Y-int: **(0,0)**

Rel. Max: $(-3.58, 22.29)$ $(.48, 5.91)$ Rel. Min: $(-1.72, -50.79)$ $(1.62, -9.91)$

Abs. Max: NONE Abs. Min: NONE

Inc: $(-\infty, -3.58) \cup (-1.72, .48) \cup (1.62, \infty)$ Dec: $(-3.58, -1.72) \cup (.48, 1.62)$

Even, Odd or Neither?: neither

$x \to \infty$, $f(x) \to \infty$

$x \to -\infty$, $f(x) \to -\infty$

Degree (Name): —

Number of Terms (name): **polynomial**