EX2. $f(x) = 3x^4 - 6x^2 + 3$

Factored Equation: $f(x) = 3(x-1)^2(x+1)^2$

Zeroes (with multiplicity):
$x = 1$; mult 2
$x = -1$; mult 2

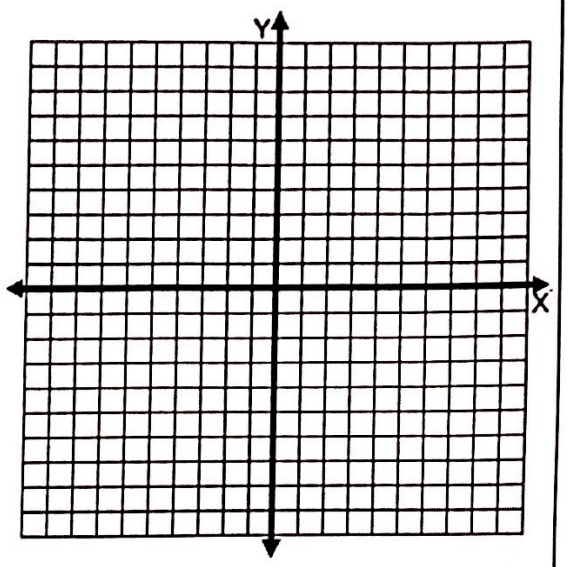
Intervals for Positive/Negative:
Positive Only

Extrema:
Abs. Min @ $(-1, 0)$
Abs. Min @ $(1, 0)$
Rel Max @ $(0, 3)$

Intervals for Increasing/Decreasing:
I: $(-1, 0)$ and $(1, \infty)$
D: $(-\infty, -1)$ and $(0, 1)$

End Behavior: $x \to -\infty$, $y \to \infty$ and $y \to \infty$, $x \to \infty$

Y-intercept: $(0, 3)$



EX3. $f(x) = -2x^5 - x^4 + 6x^3$

Factored Equation: $f(x) = -x^3(2x-3)(x+2)$

Zeroes (with multiplicity):
$x = -2$; mult. 1
$x = 0$; mult. 3
$x = +\frac{3}{2}$; mult. 1

Intervals for Positive/Negative:
+ / −

Extrema:
Rel Min @ $(-1.56, -10.22)$
Rel Max @ $(1.16, 3.35)$

Intervals for Increasing/Decreasing:
I: $(-1.56, 1.16)$
D: $(-\infty, -1.56)$ and $(1.16, \infty)$

End Behavior: $x \to -\infty$, $y \to \infty$ and $x \to \infty$, $y \to -\infty$

Y-intercept: $(0, 0)$