

F & T

Name \_\_\_\_\_

Analyze Poly Graphs HW

1.) Use calculator to graph:  $f(x) = -(x-1)^2(x+3)^2$

Domain: \_\_\_\_\_

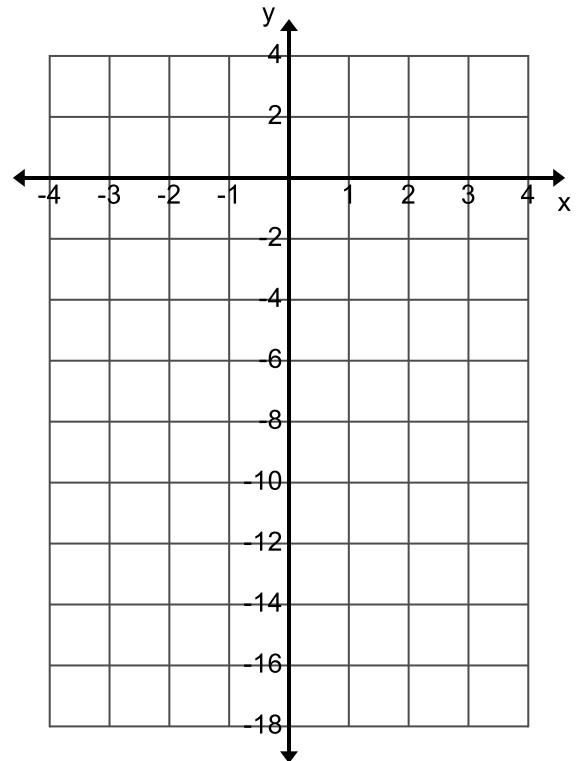
Range: \_\_\_\_\_

**Identify the relative extrema.**

Relative Maximum(s): \_\_\_\_\_

Relative Minimum(s): \_\_\_\_\_

$x$ -intercept(s): \_\_\_\_\_



**Identify the end behavior of the graph.**

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

As  $x \rightarrow \infty$ , then  $f(x) \rightarrow$  \_\_\_\_\_

Find the **average rate of change** over the interval  $[-2, -1]$

2.) Use a calculator to graph:  $g(x) = x^3 - 7x + 9$

Domain: \_\_\_\_\_

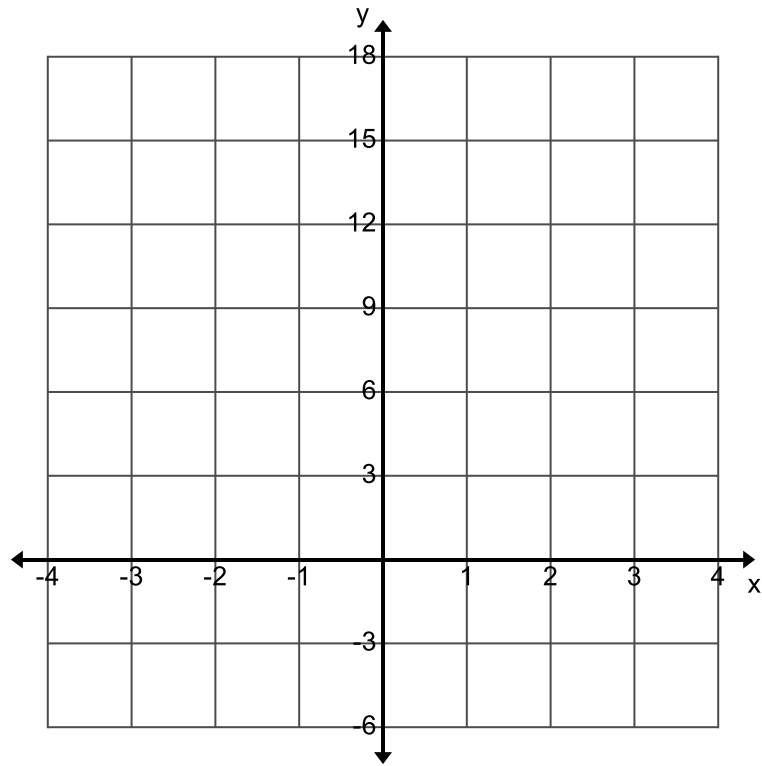
Range: \_\_\_\_\_

**Identify the relative extrema.**

Relative Maximum(s): \_\_\_\_\_

Relative Minimum(s): \_\_\_\_\_

x-intercept(s): \_\_\_\_\_



**Identify the end behavior of the graph.**

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

As  $x \rightarrow \infty$ , then  $f(x) \rightarrow$  \_\_\_\_\_

Find the **average rate of change** over the interval  $[-1, 3]$