

Bellwork:

Simplify: $\frac{4x^2}{2s^{-6}} \cdot \frac{2x^{-2}}{s^3}$

$$\frac{8}{2s^{-3}} = 4s^3$$

Chapter 5.2: Evaluate and Graph Polynomial Functions.

A polynomial is a monomial or sum of monomials.

Constant - $y = 1$

Linear - $y = x + 1$

Quadratic - $y = x^2 + x + 1$

Cubic - $y = x^3$

Quartic - $y = x^4 + x^3 + x^2 + 7$

Is it a polynomial:

$$y = x^4 - \frac{1}{4}x^2 + 3$$

~~$$y = x + 2x - .6x^5$$~~

we!

$$y = 7x - \sqrt{3} + \pi x^2$$

~~$$y = 5x^2 + 3x^{-1} - x$$~~

$f(x) = x^{100}$

Find $f(3) = 2x^4 - 5x^3 - 4x + 8$

$2(3)^4 - 5(3)^3 - 4(3) + 8$

$2(81) - 5(27) - 12 + 8$

$162 - 135 - 12 + 8$

23

3 | 2 -5 0 -4 8

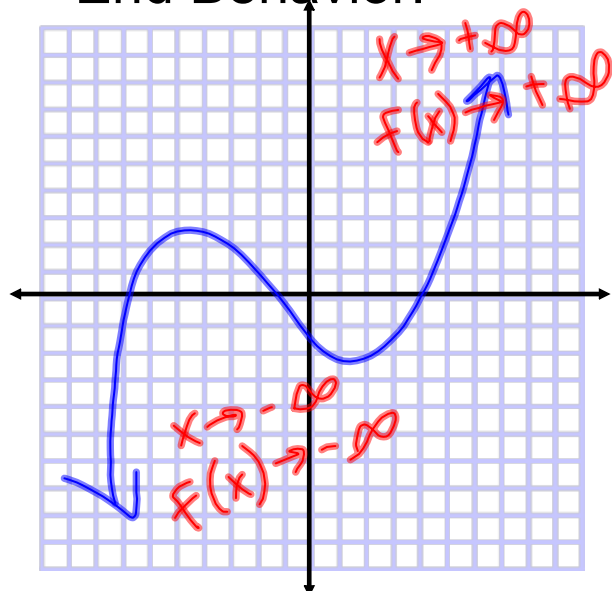
2 6 3 9 15

2 1 3 5 23

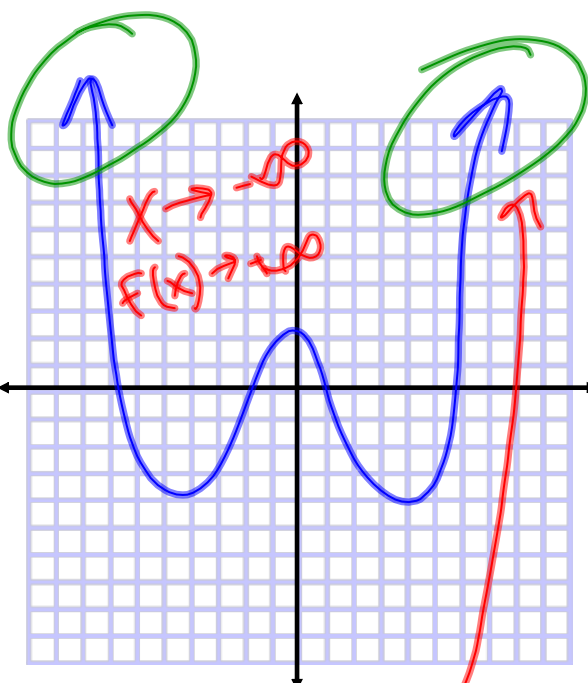
$$F(x) = 2x^3 - 5x + 7, x = -5$$

$$\begin{array}{r|rrrr} -5 & 2 & 0 & -5 & 7 \\ & & -10 & 50 & -225 \\ \hline & 2 & -10 & 45 & -210 \end{array}$$

End Behavior:



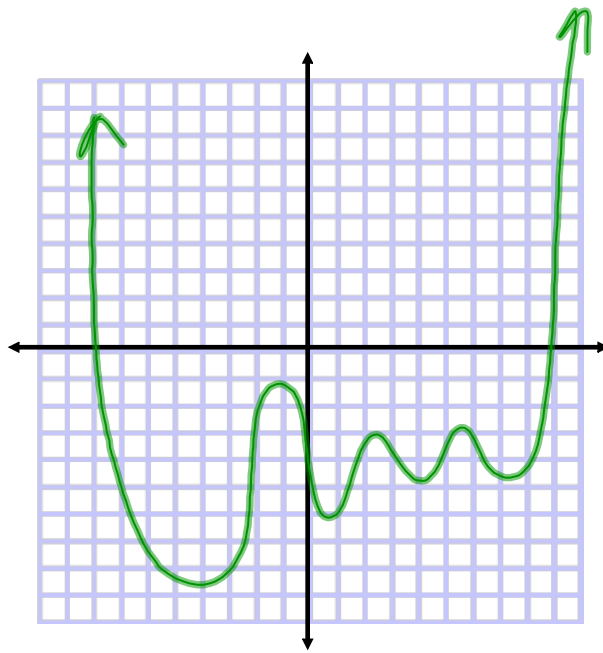
ODD



EVEN

$x \rightarrow +\infty$
 $F(x) \rightarrow +\infty$

What is true about the picture?



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

Graph:

$$y = -x^3 + x^2 + 3x - 3$$

$$y = x^4 - x^3 - 4x^2 + 4$$

Homework: Chapter 5.2 pg.341
#'s 3-12,15-20,25-30