

Sketch a graph for the following equations.

$$f(x) = -3(x-2)(x+5)^2(x-7)^3 = -3(0-2)(0+5)^2(0-7)^3$$

L.C. **neg** Degree: **6 even** $-3(-2)(25)(-343)$

$$x-2=0 \quad x-7=0$$

$$x+5=0$$

Roots: $x=2, -5$ mult $2, 7$ mult 3

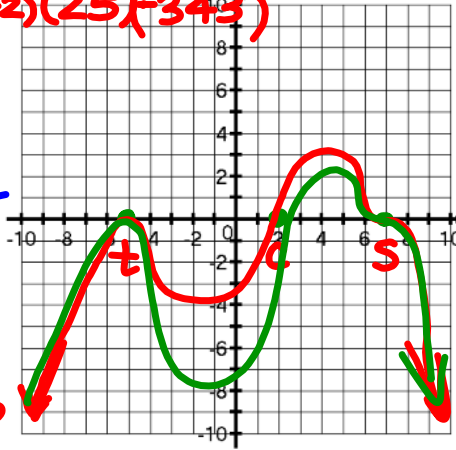
X-Intercepts: $(2,0), (-5,0), (7,0)$

Y-Intercept: $(0, -51,450)$

End Behavior:

$$x \rightarrow -\infty \quad y \rightarrow -\infty$$

$$x \rightarrow +\infty \quad y \rightarrow -\infty$$



Sketch a graph for the following equations.

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

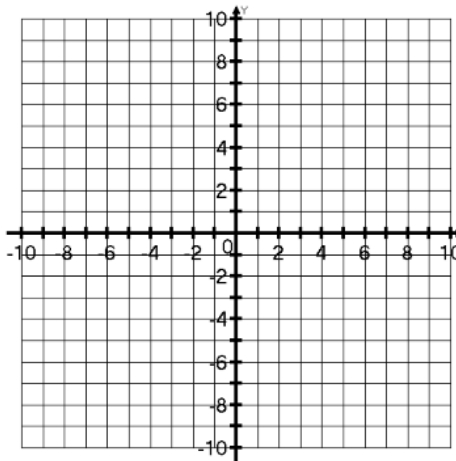
L.C. Degree:

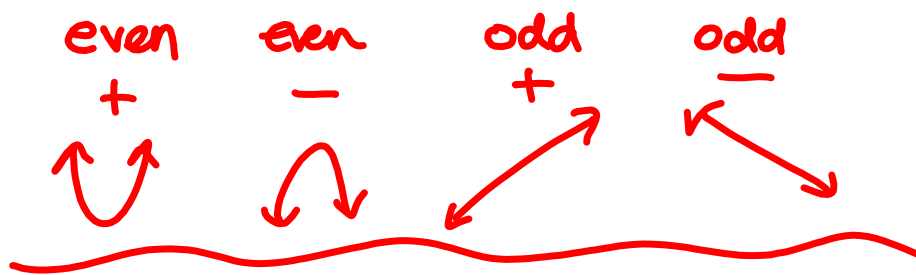
Roots:

X-Intercepts:

Y-Intercept:

End Behavior:





$$g(x) = 2x^3(x+3)^2(x-4)^5(x+7)^4(x-9)$$

L.C. pos Degree: 15

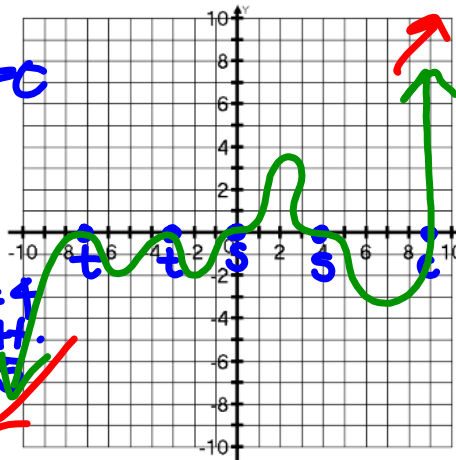
$$2x^3=0 \quad x+3=0 \quad x-4=0$$

$$x+7=0 \quad x-9=0$$

Roots: $x=0$ mult 3, $x=-3$ mult 2

X-Intercepts: $x=-7$ mult 4, $x=9$ mult 1, $x=4$ mult 5

Y-Intercept: $(0,0)$
 End Behavior: $(-7,0)$, $(-3,0)$, $(4,0)$, $(9,0)$



$$g(x) = 2x^3(x+3)^2(x-4)^5(x+7)^4(x-9)$$

L.C. Degree:

Roots:

X-Intercepts:

Y-Intercept:

End Behavior:

