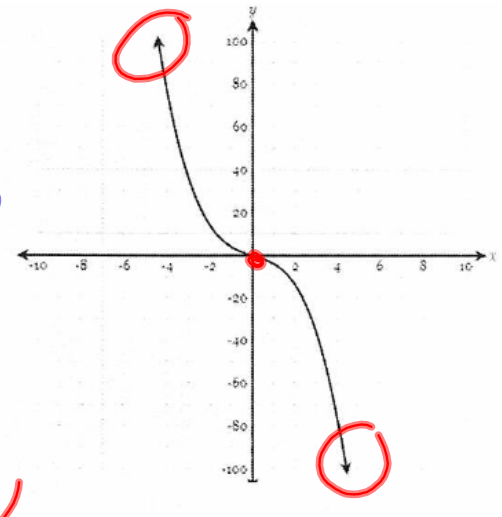
The graph of $f(x)$ is shown. Determine:

a. Whether the degree of the function is even or odd. Explain your reasoning.

1st exp (direction of ends)

odd



b. Whether the function is even or odd. Explain your reasoning.

y-axis symm

180° Rot thru (0,0)

odd

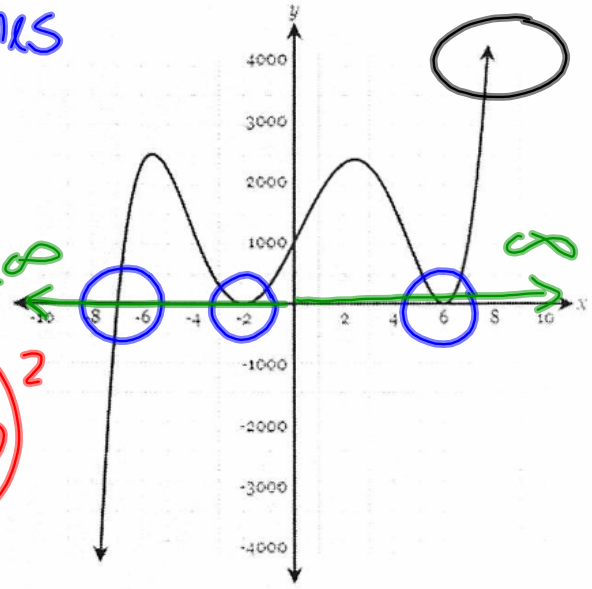
The graph of $y = f(x)$ is shown.

a. State all of the roots and classify each as an ~~even~~ or ~~odd root~~. Explain your reasoning.

#times

$x = -7, -2, 6$

once, twice, twice



$-\infty$ ∞

b. List all of the factors of $f(x)$.

$(x+7)(x+2)^2(x-6)^2$

c. Write an equation that represents $f(x)$.

$f(x) = +(x+7)(x+2)^2(x-6)^2$

d. Describe the end behavior of $f(x)$.

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

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

The polynomial function, f(x), is graphed. Circle the correct choice or fill in each blank space:

The degree of f(x) is EVEN or ODD and the leading coefficient is POSITIVE or NEGATIVE. There are

_____ real zeros and at least _____ imaginary zeros.

same direction 6

Right ↑

0

crosses x-axis

Complex Roots (come in pairs)