Descartes' Rule of Signs

Name _____

Date _____ Period _____

Let polynomial $f(x)$ be written in standard form...

The number of positive real zeros of polynomial $f(x)$ equals...

1. the number of sign variations of $f(x)$...
2. ...or that number minus an even number.

The number of negative real zeros of polynomial $f(x)$ equals...

1. the number of sign variations of $f(-x)$...
2. ...or that number minus an even number.

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

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1. the number of sign variations of $f(-x)$...
2. ...or that number minus an even number.

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

Determine the number of positive and negative real zeros the following functions may have.

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

Determine the number of positive and negative real zeros the following functions may have.

$$f(x) = -x^5 + 3x^4 - 5x^3 + 3x^2 + x + 1$$