

Pre-Calculus Applying Descartes' Rule

Lesson 177 | Precalculus | Descartes' rule and rational-root candidates

https://www.youtube.com/watch?v=C940W_1WaFg

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

Use Descartes' rule of signs to list possible numbers of positive and negative real zeros of $x^4 - 6x^3 + 9x^2 + 4x - 6$.

02

Use Descartes' rule of signs to list possible numbers of positive and negative real zeros of $x^4 - 4x^3 + 9x^2 + 13x - 6$.

03

Use Descartes' rule of signs to list possible numbers of positive and negative real zeros of $x^4 - 11x^3 + 5x^2 + 14x - 2$.

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04

Use Descartes' rule of signs to list possible numbers of positive and negative real zeros of $x^4 - 2x^3 + 14x^2 + 4x - 2$.

05

Use Descartes' rule of signs to list possible numbers of positive and negative real zeros of $x^4 - 4x^3 + 5x^2 + 7x - 3$.

06

Use Descartes' rule of signs to list possible numbers of positive and negative real zeros of $x^4 - 7x^3 + 5x^2 + 14x - 6$.

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01

Use Descartes' rule of signs to list possible numbers of positive and negative real zeros of $x^4 - 6x^3 + 9x^2 + 4x - 6$.

Positive-input coefficient signs $+, -, +, +, -$ have 3 changes: 3 or 1 positive zeros. For $f(-x)$ signs $+, +, +, -, -$ have 1 change: exactly 1 negative zero. Count multiplicities.

02

Use Descartes' rule of signs to list possible numbers of positive and negative real zeros of $x^4 - 4x^3 + 9x^2 + 13x - 6$.

Positive-input coefficient signs $+, -, +, +, -$ have 3 changes: 3 or 1 positive zeros. For $f(-x)$ signs $+, +, +, -, -$ have 1 change: exactly 1 negative zero. Count multiplicities.

03

Use Descartes' rule of signs to list possible numbers of positive and negative real zeros of $x^4 - 11x^3 + 5x^2 + 14x - 2$.

Positive-input coefficient signs $+, -, +, +, -$ have 3 changes: 3 or 1 positive zeros. For $f(-x)$ signs $+, +, +, -, -$ have 1 change: exactly 1 negative zero. Count multiplicities.

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04

Use Descartes' rule of signs to list possible numbers of positive and negative real zeros of $x^4 - 2x^3 + 14x^2 + 4x - 2$.

Positive-input coefficient signs $+, -, +, +, -$ have 3 changes: 3 or 1 positive zeros. For $f(-x)$ signs $+, +, +, -, -$ have 1 change: exactly 1 negative zero. Count multiplicities.

05

Use Descartes' rule of signs to list possible numbers of positive and negative real zeros of $x^4 - 4x^3 + 5x^2 + 7x - 3$.

Positive-input coefficient signs $+, -, +, +, -$ have 3 changes: 3 or 1 positive zeros. For $f(-x)$ signs $+, +, +, -, -$ have 1 change: exactly 1 negative zero. Count multiplicities.

06

Use Descartes' rule of signs to list possible numbers of positive and negative real zeros of $x^4 - 7x^3 + 5x^2 + 14x - 6$.

Positive-input coefficient signs $+, -, +, +, -$ have 3 changes: 3 or 1 positive zeros. For $f(-x)$ signs $+, +, +, -, -$ have 1 change: exactly 1 negative zero. Count multiplicities.