

Finding Zeroes of Polynomials and Sketching a Possible Graph

The *fully factored form* of $f(x)$ is:

The **zeros** are:

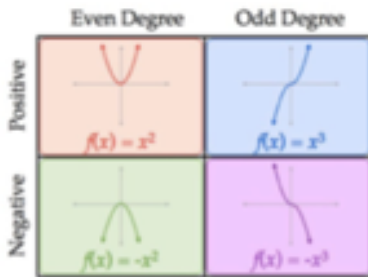
The **x-intercepts** are:

The **y-intercept** of the polynomial is:

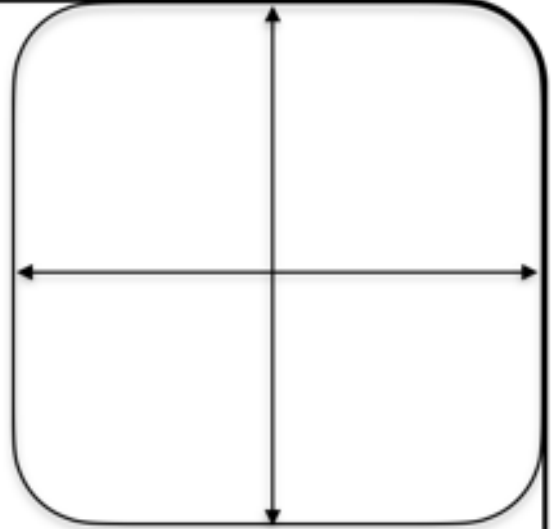
The **end behavior** of the polynomial is...

if $x \rightarrow \infty$ then $y \rightarrow$ _____

if $x \rightarrow -\infty$ then $y \rightarrow$ _____



$$y = x^3 - x^2 - 12x$$



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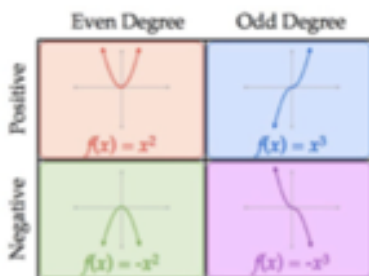
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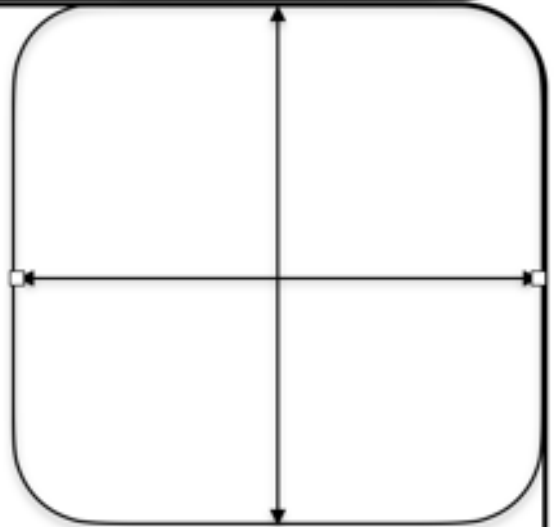
The **end behavior** of the polynomial is...

if $x \rightarrow \infty$ then $y \rightarrow$ _____

if $x \rightarrow -\infty$ then $y \rightarrow$ _____



$$y = x^4 - x^3 - 12x^2$$



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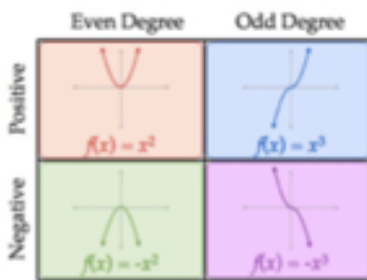
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The **y-intercept** of the polynomial is:

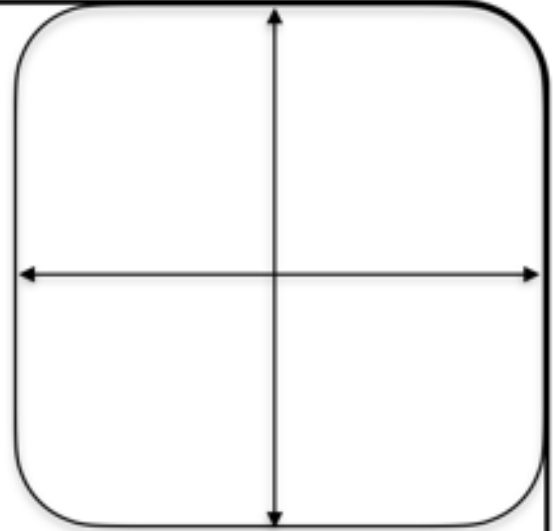
The **end behavior** of the polynomial is...

if $x \rightarrow \infty$ then $y \rightarrow$ _____

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$$y = -2x^4 + 6x^3$$



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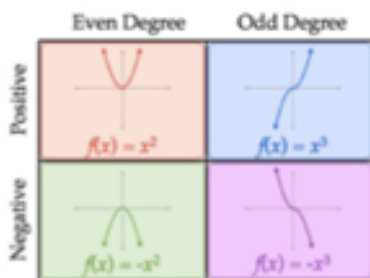
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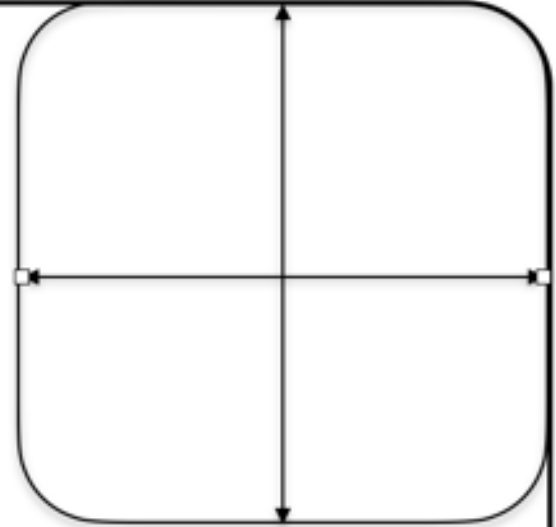
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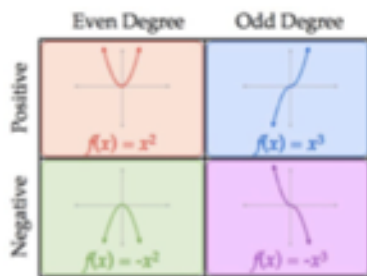
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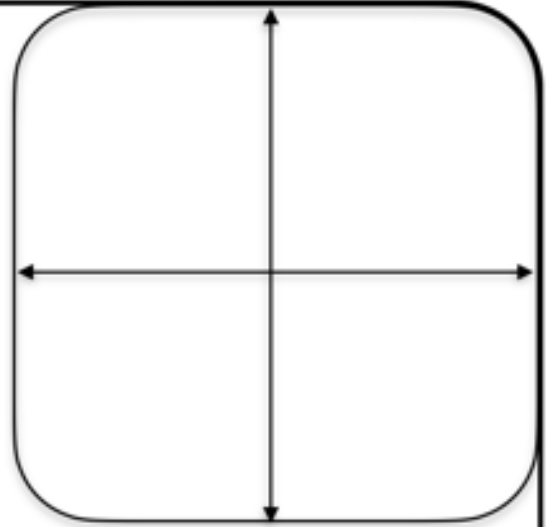
The **end behavior** of the polynomial is...

if $x \rightarrow \infty$ then $y \rightarrow$ _____

if $x \rightarrow -\infty$ then $y \rightarrow$ _____



$$y = x^5 - 9x^3$$



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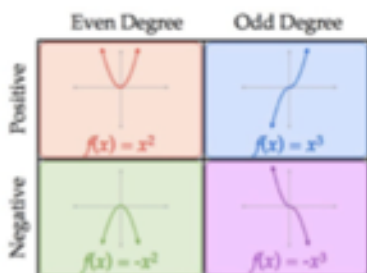
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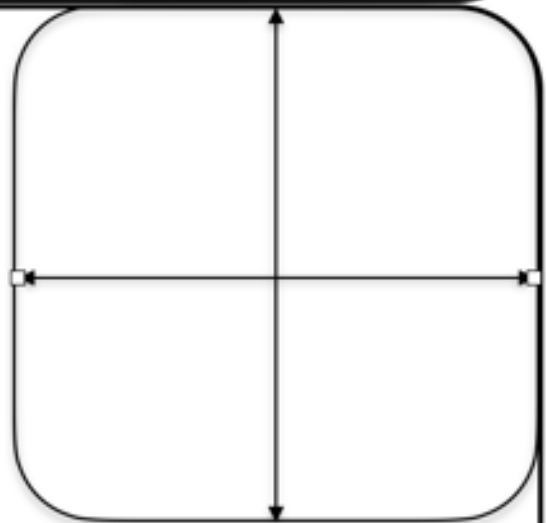
The **end behavior** of the polynomial is...

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$$y = x^6 - 15x^4$$



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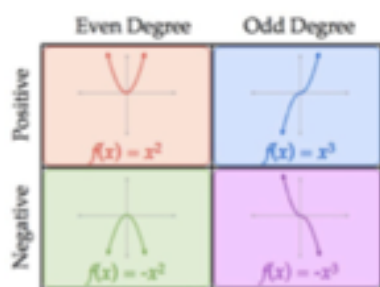
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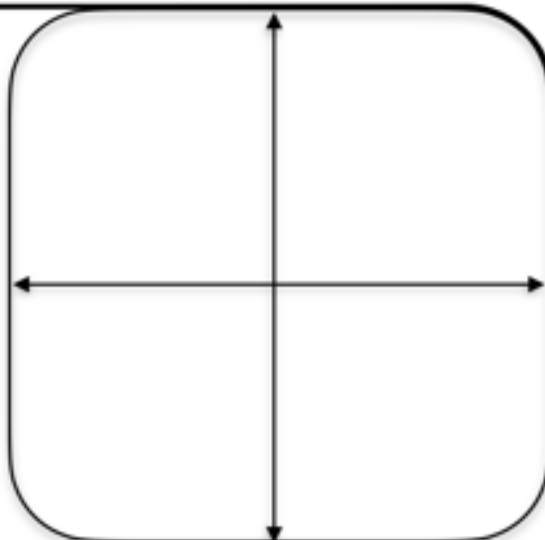
The **end behavior** of the polynomial is...

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$$y = x^3 - 4x^2 - 6x$$



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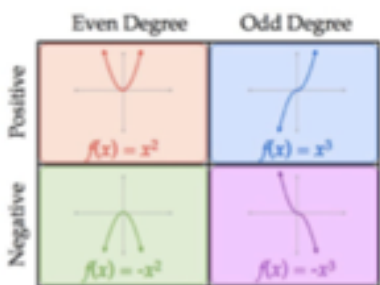
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if $x \rightarrow \infty$ then $y \rightarrow$ _____

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$$y = x^6 - 4x^5 - 6x^4$$

