

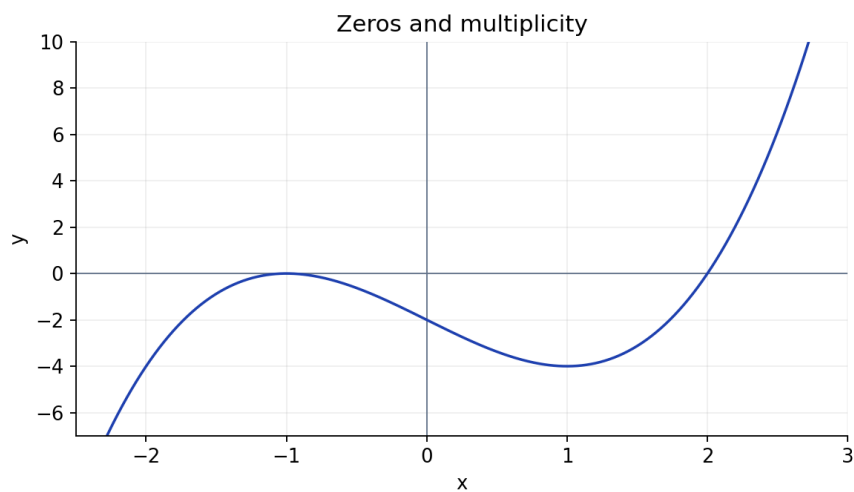
Problems | Name: _____

1.1 Zeros and Multiplicity

1.1.1. List zeros and multiplicities of $(x - 4)^3(x + 1)^2$.

1.1.2. Write a monic quadratic with zeros -2 and 5 .

1.1.3. Use the graph of $y = (x + 1)^2(x - 2)$ to describe its zeros and whether it crosses or touches.



Compare the graph at its two zeros.

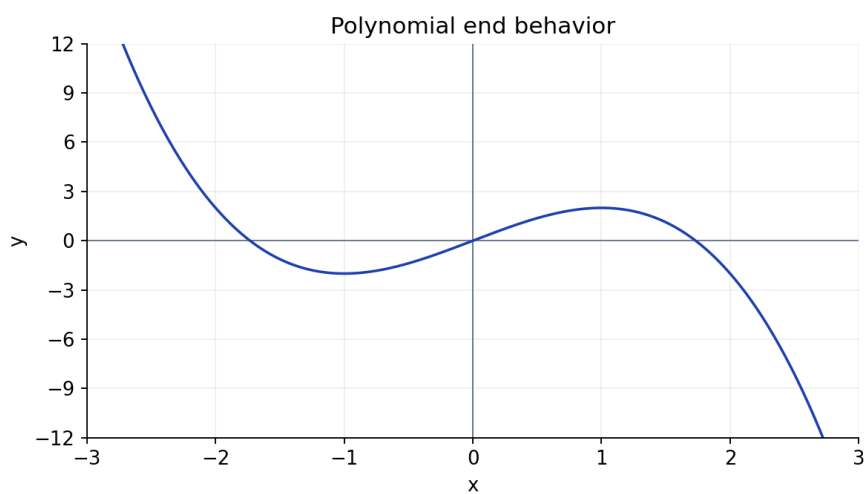
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1.2 End Behavior

1.2.1. Describe the ends of $f(x) = 5x^6 - x^2 + 2$.

1.2.2. Describe the ends of $g(x) = -x^5 + 2x^2$.

1.2.3. Use the graph of $y = -x^3 + 3x$ to identify its end behavior.



Follow the leading term at large input magnitude.

Problems | Name: _____

1.3 Complex Solutions

1.3.1. Solve $x^2 + 4 = 0$.

1.3.2. Simplify $(3 + 2i) + (1 - 5i)$.

1.3.3. Multiply $(2 + i)(2 - i)$.
