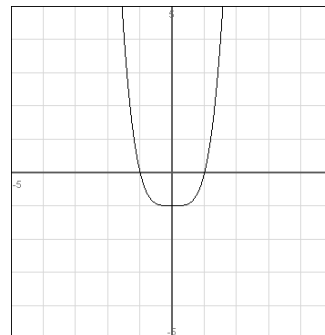


Complex Zeros of Polynomial Functions

1. Find all the zeros of the polynomial function.

a) $f(x) = x^4 - 1$



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

c) $f(x) = x^4 + 6x^3 + 10x^2 + 6x + 9$

2. Find a polynomial function with integer coefficients that has the given zeros.

a) $\frac{1}{2}, \pm 3i$

b) $0, 0, -2 \pm 4i$

3. Use the given zeros to find all the zeros of the function.

a) $f(x) = 2x^4 - x^3 + 7x^2 - 4x - 4$

Zero $= 2i$

b) $f(x) = x^3 - 3x^2 - 15x + 125$

Zero $= 4 + 3i$