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Writing Polynomial of Least Degree Given Complex/Irrational Zeros/Roots Date _____ Period _____

Irrational Root Theorem

Irrational roots of a polynomial occur in conjugate pairs.

if $a + b\sqrt{c}$ is a root, then $a - b\sqrt{c}$ is also a root.

Turn the following roots into factors

factor

root

Complex Root Theorem Complex roots of a polynomial occur in conjugate pairs.

if a + bi is a root, then a - bi is also a root.

Turn the following roots into factors

root factor Write the polynomial function of least degree with the given roots

roots at 2i, 4

Write the polynomial function of least degree with the given roots

roots at $-4\sqrt{3}$, -1

Write the polynomial function of least degree with the given roots

roots at 3 + 2i, -7

Write the polynomial function of least degree with the given roots

roots at $1 - \sqrt{2}$, 5

Irrational Root Theorem

Irrational roots of a polynomial occur in conjugate pairs.

if $a + b\sqrt{c}$ is a root, then $a - b\sqrt{c}$ is also a root.

Complex Root Theorem

Complex roots of a polynomial occur in conjugate pairs.

if a + bi is a root, then a - bi is also a root.