

Factor Theorem:

If b is a zero of $P(x)$, then $(x - b)$ is a factor of $P(x)$

Turn the following zeros into factors

Zeros

Factors

Zeros

Factors

Write the polynomial function of least degree with the given zeros.

zeros at 3, 1, -2

zeros at 5, 2, -1 multiplicity 2

Conjugate Zero Theorem

Imaginary Zeros

Imaginary zeros occur in conjugate pairs.

if $a + bi$ is a zero, then $a - bi$ is also a zero.

Turn the following zeros into factors

Zeros

Factors

Zeros

Factors

Write the polynomial function of least degree with the given zeros.

zeros at $3i$, 2

zeros at i , $-4i$

Write the polynomial function of least degree with the given zeros.

zeros at $3 + 2i$, -7