Answer on Question #42776 – Math - Calculus

Write a polynomial function of minimum degree with real coefficients whose zeros include those listed. Write the polynomial in standard form.

4, -8, and 2 + 5i

help me please and show work

Answer.

If 2 + 5i is a zero of a polynomial function then 2 - 5i is a zero too.

So, the polynomial function of minimum degree with real coefficients is:

$p(x) = (x-4)(x+8)(x-2-5i)(x-2+5i) = (x-4)(x+8)(x^2-4x+29).$

And finally, $p(x) = x^4 - 19x^2 + 244x - 928.$